Military Review
THE PROFESSIONAL JOURNAL OF THE U.S. ARMY ☐ JULY–AUGUST 2003

# Battle Command and the Battle of Tali

# Report Documentation Page

*Form Approved*
*OMB No. 0704-0188*



| 1. REPORT DATE | 2. REPORT TYPE | 3. DATES COVERED |
|---|---|---|
| **AUG 2003** | | **00-07-2003 to 00-08-2003** |

| 4. TITLE AND SUBTITLE | 5a. CONTRACT NUMBER |
|---|---|
| **Military Review: The Professional Journal of the U.S. Army. July-August 2003** | 5b. GRANT NUMBER |
| | 5c. PROGRAM ELEMENT NUMBER |
| 6. AUTHOR(S) | 5d. PROJECT NUMBER |
| | 5e. TASK NUMBER |
| | 5f. WORK UNIT NUMBER |
| 7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) **U.S. Army Combined Arms Center ,Fort Leavenworth,KS,66027** | 8. PERFORMING ORGANIZATION REPORT NUMBER |
| 9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) | 10. SPONSOR/MONITOR'S ACRONYM(S) |
| | 11. SPONSOR/MONITOR'S REPORT NUMBER(S) |

12. DISTRIBUTION/AVAILABILITY STATEMENT
**Approved for public release; distribution unlimited**

13. SUPPLEMENTARY NOTES

14. ABSTRACT

15. SUBJECT TERMS

| 16. SECURITY CLASSIFICATION OF: | | | 17. LIMITATION OF ABSTRACT | 18. NUMBER OF PAGES | 19a. NAME OF RESPONSIBLE PERSON |
|---|---|---|---|---|---|
| a. REPORT **unclassified** | b. ABSTRACT **unclassified** | c. THIS PAGE **unclassified** | **Same as Report (SAR)** | **82** | |

Military Review

Headquarters, Department of the Army
U.S. Army Command and General Staff College
Fort Leavenworth, Kansas
Volume LXXXIII — July-August 2003, No. 4
www.cgsc.army.mil/MilRev  milrev@leavenworth.army.mil
Professional Bulletin 100-03-7/8



By Order of the Secretary of the Army:
Eric K. Shinseki
General, United States Army
Chief of Staff

Official: *Joel B. Hudson*
JOEL B. HUDSON
Administrative Assistant to the
Secretary of the Army 0323101



*Military Review* (US ISSN 0026-4148) (USPS 123-830) is published bimonthly by the U.S. Army, CGSC, Fort Leavenworth, KS 66027-1254. Paid subscriptions are available through the Superintendent of Documents for $32 US/APO/FPO and $44.80 foreign addresses per year. Periodical postage paid at Leavenworth, KS, and additional mailing offices. POSTMASTER: Send address changes to Superintendent of Documents, PO Box 371954, Pittsburgh, PA 15250-7954.

# The Battle of Taji and Battle Command on the Move

AS BATTLES GO, it was a small victory, but for U.S. Army command and control (C2), the implications of the Battle of Taji might be far greater than the historical significance of the engagement itself. The battle began as the Bradley fighting vehicles and Abrams tanks of the 4th Infantry Division's (ID's) 1st Squadron, 10th Cavalry Regiment, and Task Force (TF) 1-8 seized their objectives at Taji Airfield, Iraq, on 16 April 2003. Just miles away, the 4th ID's commanding general sat in his newly modified Bradley command vehicle, watching the action unfold and coordinating the division's effort. Although it might not have appeared singularly unique, battle command in the 4th ID at Taji was exercised in a technically new style that foreshadows the future of land combat.

Nicknamed "Battle Command on the Move" (BCOTM), the new division command architecture is a radical departure from command arrangements the U.S. Army formalized during the early 1960s. In effect, in BCOTM, the division's commanding general is no longer tied to functionally staffed headquarters in fixed locations. Also, he does not have to travel to different fixed locations within the division area to command the division. The headquarters and its associated information, planning, and execution capabilities come to the commander wherever he might be on the battlefield.

The evolution of the division and corps during the Napoleonic era introduced a new dynamic into the tactical command of troops in battle—the relocation to the rear of higher commanders, distancing them from their traditional frontline locations. This was an organizational imperative made necessary by the ever larger armies fielded by continental military systems during the 19th century. As the 20th century approached, command at division and corps levels evolved into an increasingly complex mosaic of commanders supported by a staff system that gathered information and transmitted orders to forward elements. Having efficient staff procedures was of as much concern as was actual command ability. One of the main difficulties of the system was the inability of commanders to locate themselves at the decisive point to be able to command their formations effectively.

***Although it might not have appeared singularly unique, battle command in the 4th ID at Taji was exercised in a technically new style that foreshadows the future of land combat. Nicknamed "Battle Command on the Move" (BCOTM), the new division command architecture is a radical departure from command arrangements the U.S. Army formalized during the early 1960s.***

During World War I, command at division and corps levels was generally exercised from rear command posts (CPs) tied by landlines and runners to forward elements. Because these systems were vulnerable and frequently became inoperable, commanders initially sought to retain control through complex orders and rigid procedures. When this method of command proved unable to break the deadlock of trench warfare, the Germans and, later, the Allies turned to more decentralized command arrangements based on mission-type orders.

There are notorious examples of commanders simply losing touch with the real conditions at the front. British officer Sir Ian Hamilton has been criticized severely for failing to go ashore in the early hours of the ill-fated Gallipoli invasion in Turkey. Likewise,

British Field Marshal Douglas Haig was famously out of touch with the frontline situation. The Germans also had problems with situational awareness, especially the German Army's premature wheeling (when executing the Schlieffen Plan maneuver), which resulted in a right hook short of Paris.

Ineffective situational awareness also affected the Ludendorff offensives in spring 1918. Later, even as decentralized tactical command evolved and partially broke the tactical deadlock, the problem of situational awareness at division and higher levels persisted. Large headquarters systems evolved that brought more and more information to fixed sites in rear areas, especially in intelligence, fire support planning, and logistics data that supported operations. This arrangement increasingly tied commanders to their headquarters.

During the 1930s, radio and signal communications provided a partial solution to the problem of command. The German Army exploited this technology in its C2 capabilities for its new Panzer arm. Many historians and students of military history can recall the famous photograph of a smiling General Heinz Guderian leading his corps from a radio-filled halftrack in France during the 1940 blitzkrieg. Guderian, a signals specialist, pioneered the concept of bringing the information flow to the commander, instead of the commander being forced to go to a fixed location where the information flow terminated. Bringing information to the commander freed the commander from the tyranny of having to lead from the rear and allowed him to exercise command from a forward location. Other German generals, notably Field Marshal Erwin Rommel, proved adept at adapting to this new style of command. U.S. commanders, such as General George S. Patton, Major General Raymond O. Barton, and Brigadier General Robert E. Wood proved even more skilled at managing their units from forward locations. In a general sense, a wave of heroic frontline fighting generals seemed to emerge from this transformation in command architecture.

The reality of leading from the front was much less heroic in a functional sense. By moving forward, World War II commanders disassociated themselves from the detailed planning and forward thinking that a fully staffed headquarters allowed. Efficient chiefs of staff who maintained the flow of staff work supported many of the more successful commanders, but most commanders experienced logistic and support difficulties at one time or another. Several were notorious for their willful neglect of logistic matters. Herein lay a challenge all division and corps commanders faced from 1940 until today—where to position oneself on the battlefield to be able to effectively influence both the current and the future tactical situation.

U.S. combat divisions were restructured in 1963 under the Reorganization of Army Divisions (ROAD) concept. ROAD was a massive reorganization of the entire army from the battle-group-based division of the 1950s to the contemporary brigade-based division. The associated command architecture for ROAD divisions continues in the Army today. At division level there are three tactical command elements to exercise command and control of the division in combat. Corps-level headquarters mirror this arrangement, which essentially breaks up the division headquarters into functional elements that specialize in various areas of command.

***Many commanders also have individual personal command posts that allow them to remain in touch as they roam the battlefield. The U.S. Army fought in Vietnam and the Persian Gulf using this command architecture, which remains a highly successful model for effective battle command. In the last analysis, however, the commander still had to travel to functional headquarters to participate in the three basic areas of battle command.***

In contemporary U.S. command architecture, the close battle or current fight is the responsibility of the division tactical (DTAC) command post. The deep battle; intelligence analysis; coordination functions, with flank and higher formations; and future plans are the responsibility of the division main (DMAIN) headquarters. Logistics, maintenance, and support functions are the responsibility of the division support element (DSE), which is also called the division rear (DREAR) headquarters. Structurally, the DTAC is small, armored, and highly mobile, and it is supervised by an assistant division commander for maneuver. The DMAIN is large, soft-skinned, and is nominally the command center of the commanding general and his general staff. Finally, the DSE is a large collection of support elements that manages repair shops; fuel and ammunition dumps; and field hospitals and is supervised by an assistant division commander for support. Many commanders also have individual personal command posts that allow them to remain in touch as they roam the battlefield. The U.S. Army fought in Vietnam and the Persian Gulf using this command architecture, which remains a highly successful model for effective battle command. In the last analysis, however, the commander still had to travel to functional headquarters to participate in the three basic areas of battle command: the close fight; the deep fight and

US Army

4th ID soldiers observe a farmhouse suspected of containing banned munitions.

***In the few hours remaining, after unloading its vehicles from HETs and before crossing the line of departure (LD), the 4th Brigade completed precombat checks and final preparations. The 4th ID DTAC, unexpectedly delayed by congested roads, never arrived in time to set up or to establish command and control. . . . Thus, as LD time approached, Odierno was unexpectedly and perhaps prematurely forced to exercise battle command from his untested ACP.***

future plans; and combat support functions. BCOTM breaks this traditional paradigm and paves the way for the delivery of information and function to the commander wherever he might be on the battlefield.

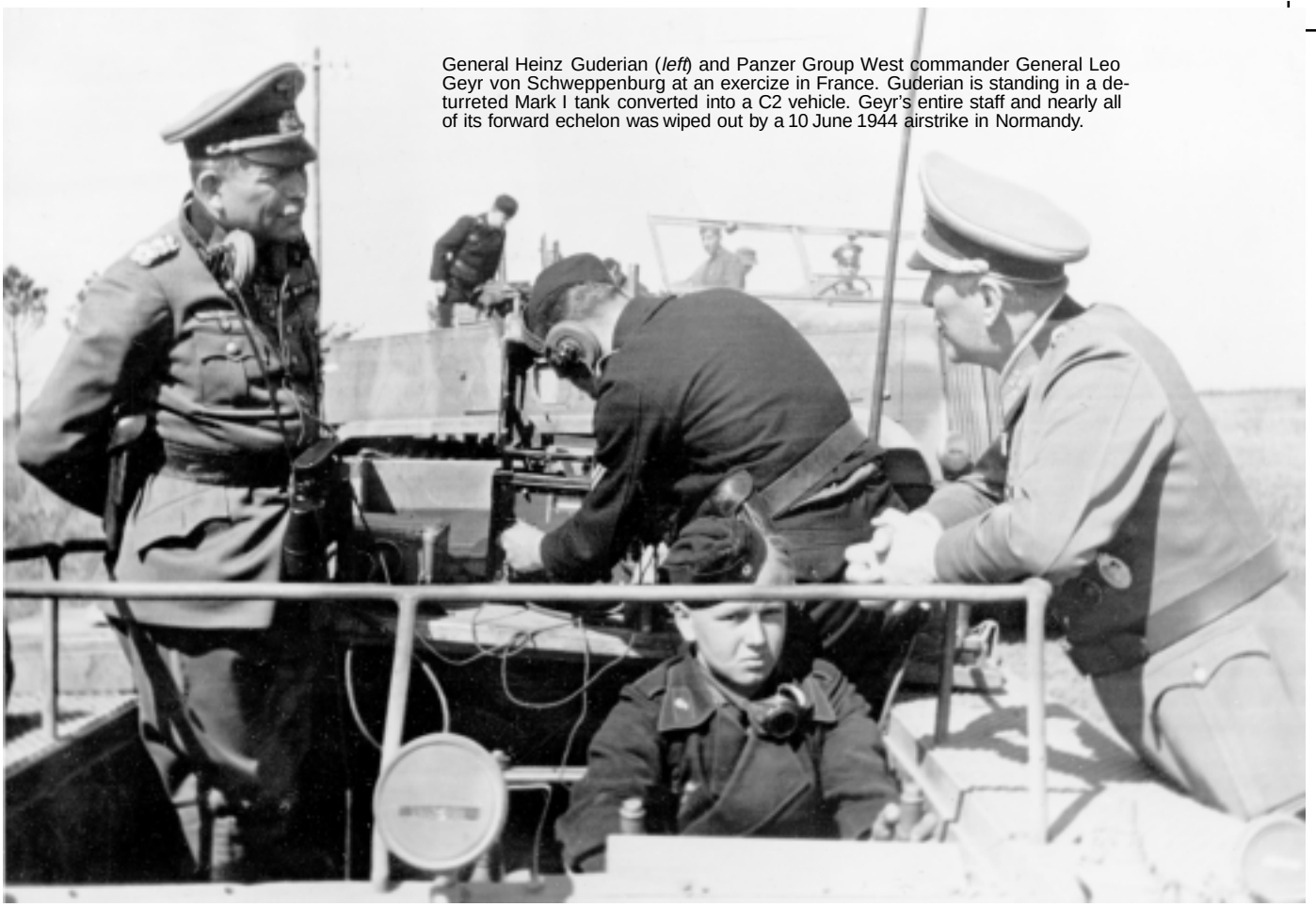
## Command in the 4th ID

The 4th ID at Fort Hood, Texas, is developing a dynamic method of command based on emerging technologies. The 4th ID has been at the forefront of the Army's digitization effort and represents the most technically advanced large-scale tactical command. In many ways, it is the descendent of such famous testbed organizations as the 11th Air Assault Division, which pioneered air mobility tactics, and the 1st Cavalry Division (Triple Capability [TRICAP]), which linked combat aviation brigades with heavy armored divisions. As part of the Army's Force XXI program, the 4th ID was a visionary organization that fielded, tested, and leveraged advanced computer technologies into the tactical array of systems. This multilayered design is not limited to information and microcommunications, it is inclusive of all types of manpower-saving enhancements.

After taking command in 2001, Major General Raymond T. Odierno steered the division's mindset from an experimental and test viewpoint back toward a readiness and deployablity viewpoint. He also looked seriously at restructuring the 4th ID's tactical command architecture to enhance his personal situational awareness of the battlefield. This initiative resulted from observing the tremendous advances in the division's capability to track units and individual elements using terrestrial tracking systems. In theory, the systems could deliver such information to any point in the division's area of responsibility. And, although not originally staffed or funded to experiment with advanced tactical C2 systems, Odierno tasked his staff to begin developing a highly mobile, state-of-the-art command post built around a Bradley fighting vehicle. His concept eventually became the BCOTM. Formally, BCOTM is titled the assault command post (ACP).

The ACP concept was placed into the hands of the division's force modernization officer, Lieutenant Colonel (LTC) Rocky Kmiecik. The basic concept was to modify a Bradley fighting vehicle and to build around the idea of bringing the division's information systems into the vehicle itself. The new hybrid command vehicle, called the M7 BCOTM-Bradley, has a communications suite that includes tactical satellite and three FM nets. The BCOTM-Bradley also brings a message processing unit that can run any combination of the following: maneuver control systems (MCS) (heavy or light); all-source analysis system (ASAS); Advanced Field Artillery Tactical Data System (AFTADS); Air and Missile Defense Work Station (AMDWS); and Force XXI battle command brigade and below (FBCB2) system.[1] These capabilities give the vehicle similar situation capabilities that division tactical command centers enjoy. Because the preliminary design looked so promising, the division received authorization to issue a contract to build four vehicles.

Communications and information display suites filled the already cramped fighting vehicle, so the division fielded an associated M1068 command track (a rebuilt M577) to accompany the new command Bradley. The M1068 is a greatly improved and enhanced command vehicle that adds complementary systems such as international maritime satellite, Iridium, C2 personal computers, SECRET Internet Protocol Network, and high-fidelity radio. The communications suite also includes Blue Force tracking, a new space-based information system in use in



General Heinz Guderian (*left*) and Panzer Group West commander General Leo Geyr von Schweppenburg at an exercize in France. Guderian is standing in a de-turreted Mark I tank converted into a C2 vehicle. Geyr's entire staff and nearly all of its forward echelon was wiped out by a 10 June 1944 airstrike in Normandy.

US Army

***Guderian, a signals specialist, pioneered the concept of bringing the information flow to the commander, instead of the commander being forced to go to a fixed location where the information flow terminated. Bringing information to the commander freed the commander from the tyranny of having to lead from the rear and allowed him to exercise command from a forward location.***

other Army divisions, but not in the 4th ID. This was necessary should the division go into combat side by side with conventional Army brigades and divisions.

The M1068 also provides power-generation for the command post. In tandem, the vehicles create a complementary and complete package of C2 capability that is armored, highly mobile, and can take an informed commander to any point on the battlefield. The four specially modified Bradleys, completed and delivered to the division in the first weeks of January 2003, were just in time for deployment to the Middle East for combat operations in Iraq.

In addition to the two command vehicles, the ACP included a security element of two Abrams tanks and a Bradley with its infantry squad, supervised by the division command sergeant major (CSM); two military police sections with armored high-mobility, multipurpose, wheeled vehicles; a line-of-sight communications team and a satellite-based secure, mobile, antijam, reliable tactical-terminal communications package; and an aviation section of two Blackhawk helicopters complete with divisional communications packages of their own. These assets provide the commander with a high level of security and mobility.

## The Battle of Taji

Although the 4th ID was initially notified for deployment to Turkey, political decisions forced it to deploy into the combat theater through Kuwait. The division arrived about a week after hostilities began. The commanding general's untested and untried M7 BCOTM-Bradley was in one of the first ships to arrive and was immediately rushed to Camp New Jersey to join the headquarters in time to march north with the division's first combat elements.

From Kuwait, the tracked portion of the ACP package was loaded on heavy-equipment transporters (HETs) for tactical movement to an assembly area near Baghdad on 13 April 2003. The vehicles were assigned to the first convoy going north, which carried the ground elements of the 1st Battalion, 10th Cavalry Regiment, from the division's 4th Brigade. The DTAC was also placed in the first convoy going north but in a follow-on serial. After a 2-day road march through the Tigris-Euphrates Valley, the tracked vehicles were unloaded in Tactical Assembly Area Iron Horse, 25 kilometers south of Baghdad, and they proceeded to Baghdad International Airport. These were the first 4th ID formations to transit

US Army

V Corps commander Lieutenant General William Wallace observes movement along the Tigris River from the 4th ID ACP area outside Saddam Hussein's New Palace in Takrit, 21 April 2003.

***The BCOTM concept creates a highly mobile, secure environment that contains a uniquely complete situational-awareness capability. The enhanced ACP gives the division commander unusual flexibility in deciding when and where to position himself during combat and postcombat operations. . . . The tiny ACP, located at Saddam's New Palace that overlooked the Tigris from a promontory in the city of Tikrit, carried the C2 burden for the entire division.***

Baghdad through the 101st Airborne Division and 3d ID areas of operations. Odierno and his personal battle staff arrived by helicopter shortly thereafter and established command and control with the 1st Brigade's tactical CP in the forward area.[2] Meanwhile, the 1-10 Cavalry, as well as the 1st Battalion, 8th Infantry, moved to attack positions along the Samarra Canal north of Baghdad in preparation for an assault on the Iraqi-held airfield at Taji.[3]

The attack on the airfield was scheduled for 0900 on 16 April 2003. In the few hours remaining, after unloading its vehicles from HETs and before crossing the line of departure (LD), the 4th Brigade completed precombat checks and final preparations. The 4th ID DTAC, unexpectedly delayed by congested roads, never arrived in time to set up or to establish command and control. Important to note here is that the DTAC, itself an expanded command post that included fire support, intelligence, and planning packages from the DMAIN, was still en route to forward areas.[4] Thus, as LD time approached, Odierno was unexpectedly and perhaps prematurely forced to exercise battle command from his untested ACP. In its final but ad hoc configuration, the ACP included three officers, who acted as battle captains; the division G3; and the division command sergeant major.[5] Brigadier General David Rodriguez, the assistant division commander for maneuver; Colonel Kevin Stramara, the division artillery commander; and Colonel Michael Moody, the 4th Brigade commander, positioned themselves at the BCM to deconflict and coordinate aviation operations and fire support.

**Employment Options**

| *Degree of control required* | *Employment* | *Time* |
|---|---|---|
| Low | On the move | N/A |
| Medium | Short halt | 0-2 hours |
| High | Long halt | 2+ hours |

The absence of the DTAC in the forward area meant that the ACP was forced, on its own merits and capabilities, to command the first combat operation undertaken by the 4th ID in over 30 years. Fortunately, vision, funding, and hard work

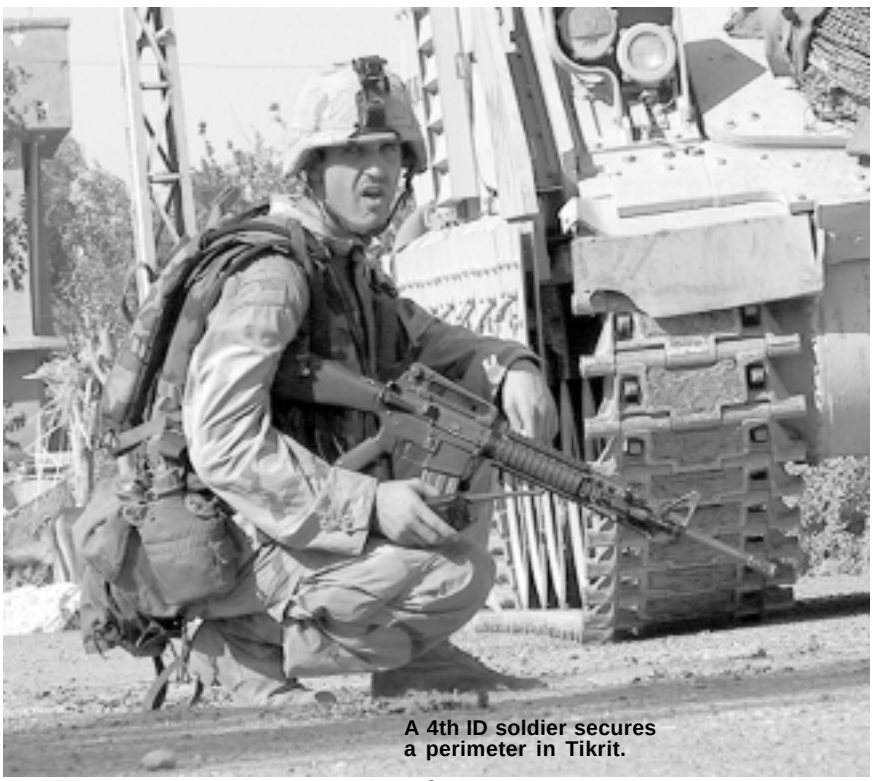
provided an immediate situational awareness of the battle area that enabled Odierno to exercise effective command of the attack.

The DTAC arrived at 0600 but was not set up and operational until later. The ACP's presence in the forward area enabled the division to launch its attack on schedule and to connect in space and time to the commanding general. The ACP's absence would have delayed the 1st Brigade's attack by as much as 9 hours. Of note is that the division launched the attack from a forward assembly area that was over 230 miles from the DMAIN, which had remained in Kuwait.

A mere 18 hours from HET download, the 1-10 Cavalry and the 1-8 Infantry task forces crossed the LD and advanced north toward Taji Airfield. Resistance was light, but isolated pockets of Iraqi soldiers fought the U.S. advance. The fight was over quickly, and the airfield was declared secured at 1221. There were no U.S. casualties, and the 4th ID captured a rich store of enemy documents, including operational computers, weapons, and munitions.

In a larger sense, the Battle of Taji vindicated the concept of delivering effective C2 to the commanding general wherever he might be on the battlefield and represented a breakthrough in the control of Army divisions in combat. After the battle, Odierno noted that the ACP had performed better than expected and that it was quick and easy to bring into action to exercise effective operational control.[6]

US Army



A 4th ID soldier secures a perimeter in Tikrit.

***The ACP's presence in the forward area enabled the division to launch its attack on schedule and to connect in space and time to the commanding general. The ACP's absence would have delayed the 1st Brigade's attack by as much as 9 hours. Of note is that the division launched the attack from a forward assembly area that was over 230 miles from the DMAIN, which had remained in Kuwait.***

## The March Upcountry

In the 5th century B.C., the great Athenian mercenary general Xenophon led 10,000 Greeks up the Tigris River valley from Babylon (near modern Baghdad) to its headwaters and then to Sinop on the Black Sea. He later wrote *Anabasis, or the March Up Country,* about his experiences.[7] The Tigris valley is much-fought-over ground that has seen the armies of the Macedonians, Romans, Arabs, Turks, and British. In 2003, it was America's turn.

On 17 April 2003, the ACP jumped forward twice, first to Taji Airfield and then to Sihab Abahr Military Complex, to prepare for the next phase of tactical movements north. The 4th ID was immediately tasked to maintain its momentum and to clear the routes north to Tikrit. The ACP jumped again on 18 April across the Tigris River to another military complex. Finally on 19 April, the ACP occupied the Presidential Complex in Tikrit itself, where it linked up with U.S. Marine Corps TF Tripoli. The tactical situation was changing almost by the minute as rapid U.S. advances followed the regime's collapse. A newly arrived battalion task force (1-66) was ordered to drive on Mosul to add combat power to the light U.S. forces airlifted there scant days before. The 4th ID was being stretched like a rubber band. Over half of its combat power, its main headquarters, and most of its support elements were still in Kuwait, and its forward elements were almost in Mosul. The division was operating over lines of communications in excess of 400 miles. Effective communications between the division's front and rear elements were being extended to the thinnest margin.

Other division objectives were even farther away, and the rubber band was close to snapping. However, the division was entering a period of several days of reduced conventional threat wherein the commander could take risk in a somewhat lower level of command and control. To support the

complex operations that would immediately follow the occupation of the division area, Odierno needed to bring the DTAC and the DMAIN (over 80 and 300 miles away, respectively) into forward operating areas. He ordered the DTAC forward on 20 April, and the DMAIN began to disassemble and load up the same day. Both CPs were effectively out of the division command net. Once again, the tiny ACP, located at Saddam Hussein's New Palace that overlooked the Tigris River from a promontory in the city of Tikrit, carried the C2 burden for the entire division. The ACP simultaneously coordinated and executed the 4th ID's relief-in-place of TF Tripoli. The ACP's capabilities enabled Odierno to maintain visibility of the widely deployed forces while the two larger tactical CPs caught up with the rapidly moving forward elements. Not having a capable ACP would have substantially delayed the deployment to the forward area of the division's principal tactical command headquarters. The DTAC closed on the Main Palace at Tikrit on 20 April, and the DMAIN closed there on 23 April. As the 4th ID entered a critical phase of regime change in the stronghold of the Ba'ath Party, division headquarters was fully prepared to execute its mission.

In May 2003, the 4th ID conducted two widely separated political-military operations using the ACP. The first operation included a series of delicate diplomatic talks with the leaders of the Mujahedeen-e Khalq (MEK). Odierno, on behalf of coalition forces, negotiated MEK's disarmament and movement to protected locations.[8] During this operation the ACP was moved directly to the negotiation site, which allowed the 4th ID negotiating team immediate access to higher headquarters and provided the ability to maintain continuity of operations throughout the 3-day period. Later, the ACP jumped to Kirkuk, where the division conducted a sensitive, extended selection process to establish an interim provincial government. Again, the ACP enabled Odierno to participate directly in critical operations far removed from the tactical and main headquarters.

## Lessons Learned

The division learned several things from the Battle of Taji. First, the battle was fought with no FM communications between the division and brigade commander, and there were no landlines. Moreover, there were no paper maps or graphical overlays.[9]

Second, the BCOTM concept appears sound. The ACP was completely operational within 15 minutes of occupation and established connectivity and tight control immediately thereafter. Its presence at Taji enabled the brigade to attack on time with effective division-level command and control.

Third, at Taji, the difficulty of trying to integrate information systems of different generations became apparent when it proved difficult to merge the 4th ID situation, which used a terrestrial tracking system, with adjacent units, which used the newer Blue Force tracking system. Information was displayed on separate monitors, and Odierno had to integrate the information visually on the spot.

Fourth, the employment options the 4th ID developed for the ACP are based on the degree of control required for operational employment of the division and are as summarized in the table.

As the U.S. Army advances into the 21st century, it must continue to capture, leverage, and exploit technologies that multiply its combat effectiveness. The BCOTM concept creates a highly mobile, secure environment that contains a uniquely complete situational-awareness capability. The enhanced Bradley/M1068-equipped ACP gives the division commander unusual flexibility in deciding when and where to position himself during combat and postcombat operations. BCOTM is a proven, workable model that will continue to evolve and mature as an integral part of the Army's C2 architecture; it is the way forward. ***MR***

**NOTES**

1. The MCS creates and automates the distribution of the common tactical picture as well as integrating the Battlefield Functional Area C2 System and the Battle Command System; ASAS; AFTADS; and AMDWS, and the FBCB2.
2. The 1st Brigade, 4th ID, which commanded the 1-10 Cavalry and TF 1-8, conducted the attack on the Taji Airfield.
3. Taji Airfield was the home of the Iraqi aviation and air defense schools.
4. Although the DTAC was scheduled to arrive much earlier, it was substantially delayed en route by an unexpectedly large Muslim Haj (pilgrimage) that put thousands of Iraqis directly on the division's march routes to Karbala.
5. The three officers in the ACP who acted as battle captains were LTC Rocky Kmiecik, LTC J.T. Thomson, and CPT Colin Brooks. The division G3 was LTC J.B. Burton. The division CSM was Chuck Fuss.
6. Ibid.
7. Xenophon, *Anabasis, or the March Up Country.* See on-line at <www.fordham.edu/halsall/ancient/xenophon-anabasis.html>.
8. The MEK is an Iranian-backed paramilitary organization operating in central Iraq.
9. The authors believe that the Battle of Taji might be the first electronic (paperless) battle fought by a U.S. infantry division.

*Major General Raymond T. Odierno, U.S. Army, is Commander, 4th ID, Tikrit, Iraq. He received a B.S. from the U.S. Military Academy, an M.S. from North Carolina State University, and an M.A. from the Naval War College. He has served in various command and staff positions in Iraq, Germany, and the continental United States (CONUS).*

*Lieutenant Colonel Edward J. Erickson, U.S. Army, Retired, is a political adviser to the commanding general, 4th ID. He received a B.S. from State University of New York-Albany, an M.Ed. from St. Lawrence University, an M.A. from Colgate University, and he is a graduate of the Command and General Staff College, Fort Leavenworth. He has served in various command and staff positions in Italy, Turkey, Germany, and CONUS*

# The Victory Disease

*To secure ourselves against defeat lies in our own hands, but the opportunity of defeating the enemy is provided by the enemy himself.*

— Sun Tzu[1]

LIEUTENANT GENERAL William S. Wallace, the U.S. Army's senior ground commander in Iraq said, "The enemy we're fighting is different from the one we war-gamed against."[2] Wallace's comment acknowledges a disturbing cultural phenomenon that can be found throughout the U.S. military and society. The problem stems from two necessary preconditions—demonstrated military prowess and great national strength that make the Nation and its military forces susceptible to a significant future defeat. Because of the United States' vast strength, national and military leaders might become overconfident in the Armed Forces' abilities and begin to underestimate the enemy's capabilities, two practices that could sow the seeds of disaster.

This cultural phenomenon manifests itself in a mindset, sometimes referred to as the Victory Disease, which makes a nation susceptible to defeat on future battlefields. Military analysts James Dunnigan and Raymond Macedonia highlight the concept of the Victory Disease in their work, *Getting It Right: American Military Reforms After Vietnam to the Gulf War and Beyond*.[3] According to Dunnigan and Macedonia, the Victory Disease threatens a nation that has a history of military prowess and manifests itself in three symptoms: arrogance, complacency, and established patterns of fighting. As these symptoms compound, the result might be the unanticipated defeat of a previously victorious nation.

***The Victory Disease does not always lead to battlefield defeat; it simply increases the likelihood of failure. Since preconditions might exist for the United Sates to fall prey to the Victory Disease, the question is whether the U.S. Army can decrease the likelihood of military disasters in future operations.***

The Victory Disease does not always lead to battlefield defeat; it simply increases the likelihood of failure. Since preconditions might exist for the United Sates to fall prey to the Victory Disease, the question is whether the U.S. Army can decrease the likelihood of military disasters in future operations.

The Victory Disease might occur across all of the defined levels of war—strategic, operational, and tactical. At the strategic level of war, the Victory Disease might afflict a nation's citizens, national political leaders, and senior military leaders. At the tactical and operational levels of war, the disease might infect military leaders and planners.

***The events leading up to the 1973 Yom Kippur War, which found the Israelis initially afflicted by the Victory Disease, illustrate the symptom of national arrogance. Because of their resounding successes during the 1967 Six Day War, the Israelis believed their forces were superior to any Arab force. Compounding this complacency was their dominance over the Arabs in three critical areas: intelligence, air forces, and armored forces.***

To understand the Victory Disease, one must first understand its symptoms. Historical examples illustrate the symptoms of the disease and how they interact to bring about defeat. Seldom are symptoms as obvious as they might appear. Hindsight enhances the obviousness of the symptoms. One must avoid judging past leaders, since clarity comes through the prism of historical analysis. The danger comes from how easily and gradually the disease can creep into the thinking of national and military leaders.

## The Symptoms in History

Certain preconditions are requisite for the Victory Disease to occur. A nation must be powerful militarily and have a history of recent victories. Military forces that have recently suffered an ignominious defeat are quick to analyze their failings and take corrective action, while victorious militaries rarely analyze their recent victories to improve. History records the Phoenix-like rising of a defeated army more often than a victor's analyzing a recent victory.[4] Based on the requirement for vast national strength and a proven military capability, the United States is clearly susceptible to the Victory Disease. Once these preconditions exist, the symptoms of the Victory Disease might bergin to flourish.

**Arrogance.** A nation with a strong, proven military and a highly developed economy will display a national pride that can easily develop into arrogance. National arrogance can lead to an expectation for quick, decisive victories in almost any undertaking, especially a military conflict. At the strategic level of war, senior military leaders begin to believe that their vastly superior forces cannot be defeated. At the operational and tactical levels of warfighting, military units evince arrogance based on their unit's battlefield victories. Perhaps the greatest problem with arrogance is that it leads to unrealistic expectations, from the national level down to the lowest unit.

Events that occurred near Fort Phil Kearney, Wyoming, in the winter of 1866 illustrate an excellent example of tactical arrogance. Fort Phil Kearney, near modern-day Sheridan, was the site of significant contact between U.S. forces and hostile Sioux during a period referred to as "Red Cloud's War."[5] During the conflict, a brash young officer, twice awarded brevet promotions for bravery during the American Civil War, displayed a deadly level of arrogance.[5] Captain William J. Fetterman, only recently arrived from duties in the East, boasted that with a mere 80 men, he could "ride through the whole Sioux Nation," an enemy he ridiculed as being beneath his regard.[7]

On 21 December 1866, Fettermen led his command (eerily numbering 81 men) into a well-laid Sioux ambush. Every member of his com-

"The Lost Dispatches" by Charles Schreyvogel

mand was killed.[8] Fettermen's contempt for the Sioux's warfighting ability and his overconfidence in his own military prowess and in the capability of his own mixed force of infantry and cavalry illustrate the effect of arrogance on a formerly victorious military leader.

The events leading up to the 1973 Yom Kippur War, which found the Israelis initially afflicted by the Victory Disease, illustrate the symptom of national arrogance. Because of their resounding successes during the 1967 Six Day War, the Israelis believed their forces were superior to any Arab force. Compounding this complacency was their dominance over the Arabs in three critical areas: intelligence, air forces, and armored forces.[9] Because of this arrogance, the Israelis posted only limited forces along their borders with Egypt (in the Sinai, along the Bar-Lev Line) and Syria (in the Golan Heights). They believed these forces could delay an Arab offensive long enough to allow the Israeli Defense Forces (IDF) to mobilize its reserves for another easy victory.

As an Israeli division commander put it, "The common expectations from the IDF were that any future war would be short with few casualties."[10] This arrogance nearly cost Israel its first defeat at the hands of its Arab enemies, a defeat that might have resulted in the complete destruction of the Jewish state. This example is interesting in that Israel's arrogance did not result in a defeat; however, the conditions for failure existed, and the first several days of battle were traumatic for Israeli leadership.

***Every member of Fettermen's command was killed. Fettermen's contempt for the Sioux's warfighting ability and his overconfidence in his own military prowess and in the capability of his own mixed force of infantry and cavalry illustrate the effect of arrogance on a formerly victorious military leader.***

**Complacency.** As arrogance flourishes, the feeling of invincibility creates a sense of complacency. Leaders begin to tell themselves, "We can do this with one hand tied behind our backs, so why get excited about it?" This complacency stems from the arrogant belief that one's own

***As arrogance flourishes, the feeling of invincibility creates a sense of complacency. . . . Nowhere in planning is complacency more evident than in analyzing the situation. A superficial understanding of the enemy's culture will not determine accurately his likely courses of action or how he might react to one's own actions.***

forces are unstoppable and invincible; thus, one might become complacent in the planning of operations. For example, nowhere in planning is complacency more evident than in analyzing the situation. A superficial understanding of the enemy's culture will not determine accurately his likely courses of action or how he might react to one's own actions.[11]

Complacency is also evident in the making of superficial battle plans, a practice that stems from believing that one's own military superiority is enough to ensure victory. Leaders assume that the enemy is incapable of affecting friendly actions because of the supposed superiority of friendly forces. This symptom of the Victory Disease often develops during periods of peace and leads to poor military performance at the outbreak of hostilities.

Following the Allied victory in World War II, U.S. forces became complacent as they shifted from combat duties to occupation duties. Adding to the complacency was the growing belief that the new Atomic Era would reduce the need for ground combat forces. Nowhere was this complacency more profound than in the U.S. Eighth Army, which occupied Japan. These forces, consisting of the 7th, 24th, and 25th Infantry Divisions and the 1st Cavalry Division, were poorly equipped and inadequately manned and trained.[12]

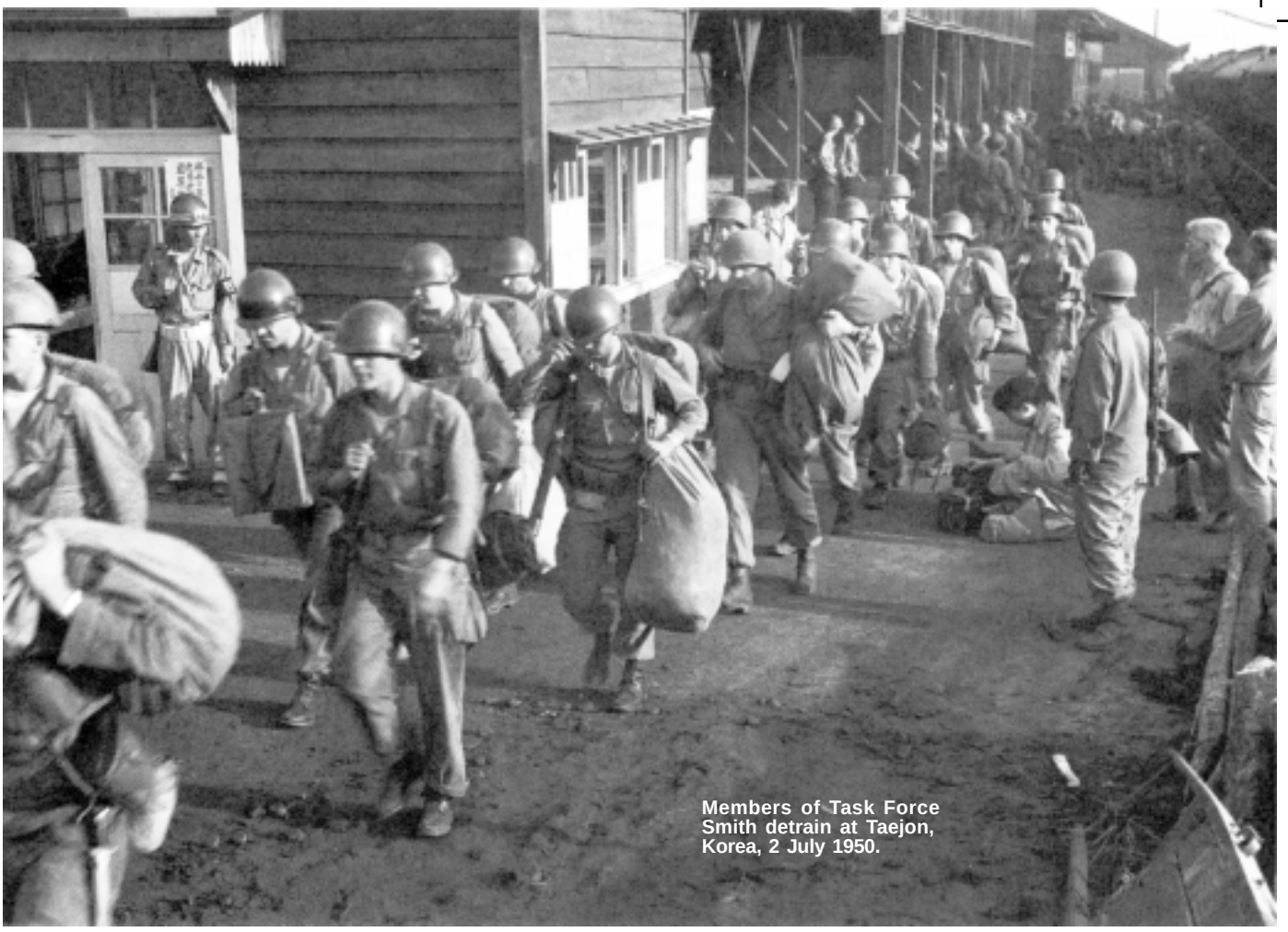
The first element to respond to the 1950 North Korean invasion was a 24th Infantry Division battalion, commanded by Lieutenant Colonel Charles B. Smith. The unit was rushed from occupation duty in Kyushu, Japan, to a position 3 miles north of Osan, South Korea. From this position, Task Force Smith was to block the North Korean advance.[13]

Unfortunately, the soldiers of Task Force Smith were unprepared for the mission. Occupation duty in Japan had severely curtailed their training because Japan's crowded home islands lacked adequate training areas for exercises larger than company-size.[14] Occupation duty had also adversely affected discipline, leading to a more relaxed command atmosphere than is normally found in frontline combat units.[15] Finally, as a result of the limited need for large quantities of ammunition for occupation duty, the soldiers of Task Force Smith were sent into battle with inadequate supplies of ammunition, especially antitank ammunition. As a result of this complacency, the men of Task Force Smith were virtually brushed aside by the advancing North Korean 4th Infantry Division.

Just as Task Force Smith found itself unprepared for the outbreak of the Korean war, the Nation was unprepared for the outbreak of the American Civil War almost 90 years previously. At that time, the U.S. Army was a miniscule instrument of security on the western frontier. It was not organized or trained to conduct the massive battles that would occur during the next 4 years.

Because of complacency, the U.S. Army had made no improvements in its doctrine since the Mexican-American War in the late 1840s. This failure to change doctrine is even more amazing in light of the vast improvements in weapons technology that extended the lethal zone between opposing forces from less than 150 yards to more than 500 yards.[15] National complacency is perhaps most evident in the majority of Americans who predicted a swift conclusion to the war that would result from a single, climactic battle.[17] This complacent attitude was evident as many

US Army



Members of Task Force Smith detrain at Taejon, Korea, 2 July 1950.

Union government officials and residents of Washington, D.C., actually viewed the advance of Union forces into Virginia for the First Battle of Bull Run.[18] Civilian spectators, hoping to observe the battle and the defeat of the Rebel army, rushed in confusion and fear from the battlefield following the Confederate victory. The complacent Union populace, taking the enemy for granted and expecting a rapid conclusion to the war, was completely unprepared for the initial defeat.

Perceived national strength and a history of success led to arrogance. Arrogance, in turn, led to complacency. Because of the compounding nature of the symptoms of arrogance and complacency, complacency sets national and military leaders up to habitually use established patterns, thus making them highly susceptible to losing the initiative if the enemy chooses to do something unexpected.

***[Smith's battalion] was rushed from occupation duty in Kyushu, Japan, to a position 3 miles north of Osan, South Korea. From this position, Task Force Smith was to block the North Korean advance. Unfortunately, the soldiers of Task Force Smith were unprepared for the mission. Occupation duty in Japan had severely curtailed their training.***

## Using Established Patterns

As arrogance and complacency grow unchecked, national and military leaders begin to believe that a standard approach will work for many scenarios, but the use of patterns endangers one's forces when fighting a thinking enemy. If a force uses a proven pattern to solve similar tactical problems, and the enemy reacts in a standard fashion, then the force will likely have success. The danger comes about when the enemy refuses to play properly and reacts in a new or different manner. Since a force afflicted by the Victory Disease will have simply gone through the motions of planning, unexpected enemy reaction will shock the friendly force and allow the enemy to gain the initiative. Yielding the initiative to the enemy becomes the most likely cause for defeat. The cumulative symptoms of the Victory Disease will have had their effect;

Japanese officers survey some of the Russian battleships and cruisers sunk by their Army's heavy seige artillery during the Imperial Navy's blockade of Port Arthur, December 1904.

***In 1904, the Japanese launched a surprise attack on the Russian Pacific squadron, then in harbor at Port Arthur. . . . The goal of this . . . operation was "a victory so rapid and decisive that Russia's superior resources could never be brought into play." Forty years later, when the Japanese perceived the United States as a threat to their Pacific empire-building, they chose a similar strategy.***

an enemy who has learned to adapt will defeat the friendly force.

The British military experience during the Zulu wars of the late 19th century illustrates the symptoms of the Victory Disease. The native Zulu population of Southern Africa was just another indigenous people for the British Army to defeat in the Crown's colonization of Africa. Before fighting the Zulus, the British Army had fought the Boers over possessions in southeastern Africa, but much of the British colonial fighting experience came about as a result of battles with the Xosas, the Pedis, and finally the Gcalkas, the indigenous tribes of the region.[19]

The British defeat at the Battle of Isandlwana on 22 January 1879 illustrates the danger of a military force using established patterns. When developing the campaign that led to the Isandlwana defeat, British Commander Lord Chelmsford planned to fight the Zulus in the same manner in which he had previously "fought a messy little war on the Cape frontier to a successful conclusion."[20] Unfortunately, the Zulus did not resort to guerrilla warfare as previous opponents had done, but fielded an enormous army. Chelmsford's forces were advancing in three converging columns. At Isandlwana, the Zulu army attacked one of the unsuspecting British columns while it was encamped and destroyed it nearly to a man.

The Battle of Isandlwana provided the British Empire with the necessary impetus for eventually destroying the Zulu Kingdom, but not before the British Army lost more than 1,300 soldiers. In this example, the negative effect of using established patterns is evident. The enemy's reactions turned the tide of battle against a British force afflicted by the Victory Disease.

The Japanese experience in World War II illustrates on a national-strategic level the symptom of habitually using established patterns. In

this example, the Japanese revived a nearly 40-year-old strategy in their attempt to secure a Pacific empire. In 1904, the Japanese launched a surprise attack on the Russian Pacific squadron, then in harbor at Port Arthur. Coupled with this naval attack was a ground attack to defeat Russian forces in Manchuria. The goal of this joint operation was "a victory so rapid and decisive that Russia's superior resources could never be brought into play."[21]

Forty years later, when the Japanese perceived the United States as a threat to their Pacific empire-building, they chose a similar strategy of surprise attack against the U.S. Navy's Pacific fleet at Pearl Harbor. Simultaneously, they would seize territory throughout the Pacific Rim and attempt to establish a strategic defensive perimeter.[22]

The Japanese attempted a strategy similar to their successful 1904 plan but on a much larger scale and with higher returns if successful. However, there was also a likelihood of national annihilation in the event of failure.[23] For various reasons, the Japanese failed to strike a decisive enough blow against the United States in 1941. The Allies were able to reconstitute their forces and eventually defeat Japan in 1945.

Japan had pursued a national strategy that had brought great success in the past, but which led to total defeat 40 years later. The habit of using established patterns can leave a nation subject to defeat, since all campaigns must be viewed from their own particular context.

## The Compounding Nature of These Symptoms

The symptoms of the disease, building one on the other, develop into a full-blown, possibly fatal, case of the Victory Disease. The danger of the disease to U.S. forces is that it can allow our enemies to easily predict our responses to given stimuli. A basic principle of war the U.S. Army espouses is that of maintaining the initiative in all military action, as opposed to reacting to enemy actions. Since national and military leaders suffering from the Victory Disease are likely to use an established pattern, the enemy will be able to predict their actions and seize the initiative. Thus, a military suffering from the Victory Disease is quite likely to lose the initiative to the enemy. Herein lies the greatest danger of the Victory Disease.

Based on this analysis of the symptoms' compounding effect, one can see how this disease affects national and military leaders. As the symptoms grow, the Nation and the military will inch ever closer to failure. At the tactical level, a force that succumbs to the Victory Disease is likely to lose a battle. At the strategic level, the disease might yield a national failure.

Through the prism of historical analysis, the symptoms of the Victory Disease are evident, showing clearly how this disease grows within a military operation and leads to an increased likelihood of battlefield defeat. As a result, we must find ways to vaccinate national and military leaders to reduce the chances of their falling prey to the deadly disease.

Armed with a thorough understanding of the symptoms of the Victory Disease, the Nation begins its quest for ways to vaccinate national and military leaders. Since the result of the Victory Disease is failure,

***British Commander Lord Chelmsford planned to fight the Zulus in the same manner in which he had previously "fought a messy little war on the Cape frontier to a successful conclusion." Unfortunately, the Zulus did not resort to guerrilla warfare as previous opponents had done, but fielded an enormous army. Chelmsford's forces were advancing in three converging columns. At Isandlwana, the Zulu army attacked one of the unsuspecting British columns while it was encamped and destroyed it nearly to a man.***

***National leaders must use the media to manage the perceptions of the American people so that unrealistic expectations do not form. . . . Once these expectations form in the media, they are quickly transferred to the general populace. If allowed to form, unrealistic expectations are a source of military failure because they erode national support for a war effort, or they can erode preparedness while seeking short-term financial savings.***

the need for a vaccine is clear and the vaccine is so obvious that many cannot find it. Today, many U.S. military leaders seek technology, such as computerized analytical tools and sensors, to solve battlefield problems. In seeking a vaccine for the Victory Disease, however, these technological solutions fall short.

The only real vaccine that will protect a nation and its military from succumbing to the Victory Disease is awareness of the disease's symptoms. The disease creeps into planning through assumptions made during the planning process, but it bears its poisonous fruit during execution. Thus, by continually testing the validity of assumptions during the planning process, one can limit the possibility of falling prey to the disease. Thus, an awareness of the symptoms and understanding the root causes of the disease is the vaccine.

## How to Administer the Vaccine

While seeking a vaccine that will negate Victory Disease effects, it is important to remember that three primary groups must be vaccinated: the nation's populace, its national leaders, and its military leaders. Each group must be vaccinated in a different way, but military leaders are the key to preventing the Victory Disease's spread. Therefore, a vaccination program must begin at this level.

Potential vaccinations for military leaders come from a variety of sources. The Officer Education System could offer an increased study of military history and highlight past examples of the Victory Disease. Knowledge of the disease and its symptoms would likely yield increased vigilance on the part of military leaders and planners, making them less likely to succumb to the disease's effects. The Army's planning doctrine is another source of possible vaccines, because many of the symptoms of the Victory Disease are rooted in assumptions generated during the planning process. Thus, challenging one's assumptions during the planning process is critically important and will ensure that the effects of the Victory Disease will not find their way into the plan.

Once aware of the Victory Disease's effects, the nation's military leaders are responsible for alerting national leaders to the debilitating effects of the disease. Military leaders might do this by highlighting the symptoms of the Victory Disease as they arise in strategic planning, while resisting the opposite extreme of over-cautiousness. Once aware of the concept of the Victory Disease and its symptoms, national leaders must continually test their assumptions throughout the planning process. The goal of educating national leaders is to curb unrealistic expectations and to prevent them from assuming that U.S. forces can quickly and decisively win any battle at the cost of only a few friendly casualties.

National leaders have a responsibility to pass on this newfound knowledge to the general populace. National leaders must use the media to manage the perceptions of the American people so that unrealistic expectations do not form. A common source of these unrealistic expectations is the media. Once these expectations form in the media, they are quickly transferred to the general populace. If allowed to form, unrealistic expectations are a source of military failure because they erode national support for a war effort, or they can erode preparedness while seeking short-term financial savings.

As we study the after-action reports of operations in Iraq, we must attempt to discern any indications of the Victory Disease. The necessary preconditions clearly exist for the United States to fall victim to the Victory Disease's effects. America's position as the sole global superpower, combined with its vast economic strength and history of military prowess, makes it an excellent breeding ground for the Victory Disease. These characteristics are all things to be proud of, but unfortunately, national pride has the potential of developing into arrogance.

This article is not meant to criticize or erode self-confidence within the U.S. military. It is meant to highlight the need for constant analysis of enemy and friendly forces. The U.S. military must constantly seek a better understanding of its enemies and be wary of underestimating any potential adversary. Likewise, national and military leaders must be cognizant of the capabilities and limitations of their own forces to ensure they are tasked according to those capabilities and limitations. The goal is to ensure that the U.S. military is able to maintain the initiative, force the enemy to react, and ultimately defeat any adversary. Having been exposed to the potential for failure, the U.S. Army must devote itself to increasing leader awareness and diminishing the likelihood of falling prey to the Victory Disease. ***MR***

***The only real vaccine that will protect a nation and its military from succumbing to the Victory Disease is awareness of the disease's symptoms. The disease creeps into planning through assumptions made during the planning process, but it bears its poisonous fruit during execution. Thus, by continually testing the validity of assumptions during the planning process, one can limit the possibility of falling prey to the disease.***

**NOTES**

1. Sun Tzu, *The Art of War*, Chapter IV, Tactical Dispositions #2, on-line at <www.kimsoft.com/polwar4.htm>, 1 May 2003.
2. Lieutenant General William S. Wallace, quoted in Rick Atkinson, "General: A Longer War Likely: Ground Commander Describes Obstacles," *The Washington Post*, 28 March 2003, A1.
3. James Dunnigan and Raymond Macedonia, *Getting It Right: American Military Reforms After Vietnam to the Gulf War and Beyond* (New York: William Morrow and Company, Inc., 1993), 21.
4. Many historians and military analysts cite the example of the German Army following the invasion of Poland as a case in which a successful military force honestly assessed its failings after a victory and made improvements to its system and doctrine. Although this occurred, we must note that while Adolph Hitler and his party elite were inspired by the quick victory of German arms, Hitler's generals saw many deficiencies in their system that they felt sure would be exploited by a more competent adversary. Thus, this example could support either side of this argument.
5. S.L.A. Marshall, *Crimsoned Prairie: The War Between the United States and the Plains Indians During the Winning of the West* (New York: Scribner's Sons, 1972), 83. Red Cloud's War was known as such because its Indian architect was Ogallala Sioux chieftain Red Cloud. Red Cloud's War is one of the few times in U.S. history in which the U.S. military conceded to enemy demands and signed a treaty that contained provisions unfavorable to the U.S. Government. As a result of the negotiations that ended Red Cloud's War, the U.S. Army abandoned its forts along the Powder River in Wyoming and Montana.
6. F.B. Heitman, *Historical Registry of the United States Army: From Its Organization, September 29, 1789, to September 29, 1889* (Washington, DC: The National Tribune, 1890), 436. The 19th-century army granted brevet (or honorary) promotions for actions of great bravery.
7. Cyrus T. Brady, *Indian Fights and Fighters* (Lincoln: University of Nebraska Press, 1971), 23.
8. Ibid., 24-32.
9. George W. Gawrych, "The 1973 Arab-Israeli War: The Albatross of Decisive Victory," *Leavenworth Papers*, No. 21 (Fort Leavenworth, KS: Combat Studies Institute, 1996), 5.
10. Avraham Adan, *On the Banks of the Suez: An Israeli General's Personal Account of the Yom Kippur War* (Jerusalem: Edanim Publishers, 1979), xii.
11. Douglas Scalard, "People of Whom We Know Nothing: When Doctrine Isn't Enough," on-line at <www.cgsc.army.mil/milrev/English/julaug97/scalard.htm>, 22 February 2003. Aldous Huxley's concept of vincible ignorance is appropriate in regard to the U.S. military's lack of emphasis on cultural intelligence. Based on vincible ignorance, one knows that he is ignorant of the enemy's culture but does not regard an understanding of the enemy's culture as essential to victory. This lack of cultural intelligence is unimportant since one's own force is invincible and the enemy is virtually impotent.
12. Roy Flint, "Task Force Smith and the 24th Division: Delay and Withdrawal, 5–19 July 1950," *America's First Battles: 1776—1965*, eds. Charles Heller and William Stofft (Lawrence: University Press of Kansas, 1986), 269-74.
13. Ibid., 277-79.
14. T.R. Fehrenbach, *This Kind of War* (New York: MacMillan, 1963; reprint, Washington, DC: Brassey's, 1994), 66.
15. Ibid., 66.
16. W. Glenn Robertson, "First Bull Run, 19 July 1861," *America's First Battles: 1776—1965*, eds., Charles Heller and William Stofft (Lawrence: University Press of Kansas, 1986), 86.
17. Ibid., 88.
18. John MacDonald, *Great Battles of the Civil War* (New York: MacMillan, 1992), 12.
19. Lawrence James, *The Savage Wars: British Campaigns in Africa, 1870-1920* (New York: St. Martin's Press, 1985), 32, 34-36.
20. Ian Knight, "The Battle of Isandlwana: Wet with Yesterday's Blood," on-line at <www.battlefields.co.za/history/anglo-zulu_war/isandlwana/isandlwana_ian%20knight.htm>, 13 December 2002.
21. Noel F. Busch, *The Emperor's Sword: Japan vs. Russia in the Battle of Tsushima* (New York: Funk & Wagnalls, 1969), 65.
22. R. Ernest Dupuy and Trevor N. Dupuy, *The Harper Encyclopedia of Military History*, 4th ed. (New York: HarperCollins Publishers, 1993), 1,232.
23. Busch, 218-20.

*Major Timothy M. Karcher, U.S. Army, is a student at the U.S. Army School of Advanced Military Studies, Fort Leavenworth, Kansas. He received a B.S. from the University of Missouri-Columbia and an M.M.A.S. in Military History from the U.S. Army Command and General Staff College. He has served in various command and staff positions in the continental United States and Europe.*

# Doctrine for Asymmetric Warfare

ANY DISCUSSION of doctrine and asymmetry must begin by acknowledging the tension inherent between the role of doctrine and the nature of asymmetry in warfare. Doctrine should succinctly express the collective wisdom about how U.S. Armed Forces conduct military operations. In 1923, historian J.F.C. Fuller wrote that "the central idea of an army is known as its doctrine, which to be sound must be principles of war, and which to be effective must be elastic enough to admit of mutation in accordance with change in circumstance. In its ultimate relationship to the human understanding this central idea or doctrine is nothing else than common sense—that is, action adapted to circumstance."[1]

While asymmetric warfare encompasses a wide scope of theory, experience, conjecture, and definition, the implicit premise is that asymmetric warfare deals with unknowns, with surprise in terms of ends, ways, and means. The more dissimilar the opponent, the more difficult it is to anticipate his actions. If we knew in advance how an opponent planned to exploit our dissimilarities, we could develop specific doctrine to counter his actions. Against asymmetric opponents, doctrine should provide a way to think about asymmetry and an operational philosophy that would take asymmetry fully into account.

One way to look at asymmetric warfare is to see it as a classic action-reaction-counteraction cycle. Our enemies study our doctrine and try to counter it. Any competent enemy will do the unexpected, if he believes it will work. When we understand the asymmetry, we counter it, and so forth. For example, if a potential opponent has biological weapons and the United States does not, our preparation occurs across a technological, doctrinal, and operational range in terms of force protection, development of antidotes, and the ability to attack or defeat the enemy's delivery means, civil support, and so on. Such preparation serves to deter the use of biological weapons, because the opponent's original asymmetric advantage has been reduced.

***Tactics are employed against an asymmetric opponent in the course of combat, but there can be no set of tactics checklists for asymmetric warfare, since each application is unique. Tactics are whatever we do against an asymmetric opponent when we arrange forces to counter that opponent.***

Unfortunately, uncertainty is inseparable from the nature of warfare, and asymmetry increases uncertainty. Those who expect doctrine and tactics, techniques, and procedures (TTP) to provide solutions and checklists for action are soon disabused of that notion during actual operations. If and when the enemy surprises us with a capability, our response is necessarily ad hoc and less effective. Depending on our preconceptions and ability to adapt, the advantage an opponent enjoys might persist. Doctrine must prepare the military force with a mindset to deal with uncertainty quickly and effectively. The Japanese navy's Long Lance torpedo illustrates our failure to deal with an asymmetric threat.

## Japan's Long Lance Torpedo

In the years between World War I and World War II, the U.S. and Japanese navies pursued different technical and tactical solutions to naval surface combat. The U.S. Navy focused on very long-range daylight gunnery, supported by seaplane spotters and sophisticated analog computers.[2] For the computers to calculate a firing solution, the firing

ship had to maintain a steady course to allow the computer to "settle down" and provide accurate data to the turrets.

The Japanese Navy developed the Type 93 Long Lance torpedo that carried a large warhead and could travel 20,000 yards or more at speeds of up to 45 knots.[3] The Japanese had an ideal fire-and-forget system. In consequence, the Japanese trained to fight at night, with radically maneuvering destroyers and cruisers that fired torpedoes.

For more than 2 years after the U.S. Navy encountered the Long Lance in early 1942, it did not appreciate the weapon's capabilities. The two navies had proceeded down different asymmetric paths, and U.S. torpedo development had many shortcomings. U.S. torpedoes were quite slow, carried a smaller warhead, had a range of less than 10,000 yards, and often failed to explode even when striking a target. In consequence, the U.S. Navy projected its poor capabilities onto those of the opponent's and refused to believe that the Japanese could deploy a superior torpedo. Eventually, U.S. air power, radar-directed gunfire, and other tactical adaptations restored some balance, but throughout the war, the Japanese torpedo baffled Navy planners. The U.S. Navy suffered an asymmetric technological and tactical surprise. Because we did not anticipate the weapon and, indeed, could not accept that the Japanese had it, we had no easy answers, and it took years to adapt.

## Developing U.S. Doctrine

To get beyond the tension inherent between asymmetry and doctrine, our focus is on two observations about asymmetry that to many of our potential opponents we are highly relevant to the development of U.S. doctrine. The first is the requirement to understand that to many of our potential opponents we appear to be as asymmetric as they appear to be to us. To the al-Qaeda fighter, cowering in a cave in a remote part of Afghanistan, fuel air explosives, dropped with deadly precision from aircraft miles away and thousands of feet up, directed by laser designators wielded by highly trained and stealthy special operation forces (SOF), is as asymmetric to him as his tactics are to us. The second point is that doctrine cannot predict the nature and form of asymmetric conflicts, but it can forecast the necessary traits and body of conceptual knowledge necessary to cope with a chaotic asymmetric operational environment.

To understand the role of doctrine, we must distinguish between doctrine and TTP. Most people using the term doctrine are referring to the whole body of doctrine and fail to separate out each component's specific role. Defining each component's role is a seemingly minor distinction, but it is important to understanding since each component plays a different part in how the military operates. More germane is that each component has a slightly different role with respect to asymmetry, and each has a different cyclic rate in terms of its development and useful life.

***Examples of asymmetry and adaptation to it can be found in insurgency warfare and the development of counterinsurgency forces and doctrine. At a tactical level, we can see the effects of the machinegun, accurate indirect artillery, and barbed wire during World War I. We can study the development of storm tactics and the armor with which to counter them. We can analyze U.S. air attacks on the Serbs in Kosovo and appreciate the Serbs' deception and camouflage tactics.***

Effective doctrine explains how we expect to fight and operate based on past experience and a best guess of what lies ahead. Doctrine—

- Provides the link between research, theory, history, experimentation, and practice.
- Encapsulates a body of knowledge and experience so it can be applied.
- Provides common understanding and a common language, which allows us to articulate clearly and succinctly what Army forces should accomplish.

The narrow definition of doctrine is "fundamental principles by which the military forces or elements thereof guide their actions in support of national objectives. It is authoritative but requires judgment in application."[4] To distinguish between the broad concept, including all four components, and the more narrow definition, we can italicize the latter.

As Fuller noted, Army doctrine should provide an operational concept, a philosophy of how the Army operates.[5] In doing so, doctrine must reconcile operational requirements with the force's perceived strengths. Armies operate best when capitalizing on demonstrated capabilities and asymmetric strengths. History contains many examples of military failure occasioned by attempts to match an enemy's style of warfare despite friendly forces being ill-suited to the challenge.

**Tactics.** Tactics deals with how units are employed during combat.[6] The actual application of

A Japanese Type 93 torpedo fired from a destroyer blew away the bow of the heavy cruiser USS *Minneapolis* on 30 November 1942. Only the crew's high level of training kept the ship afloat.

US Navy

***The Japanese Navy developed the Type 93 Long Lance torpedo that carried a large warhead and could travel 20,000 yards or more at speeds of up to 45 knots. The Japanese had an ideal fire-and-forget system. In consequence, the Japanese trained to fight at night, with radically maneuvering destroyers and cruisers that fired torpedoes.***

tactics is highly circumstantial and is both science and art. U.S. Army Field Manual (FM) 3-90, *Tactics*, states, "The science of tactics encompasses the understanding of those military aspects of tactics—capabilities, techniques, and procedures—that can be measured and codified. The art of tactics consists of three interrelated aspects: the creative and flexible array of means to accomplish assigned missions; decisionmaking under conditions of uncertainty when faced with an intelligent enemy; and understanding the human dimension—the effects of combat on soldiers. The tactician invokes the art of tactics to solve tactical problems within his commander's intent by choosing from interrelated options, such as forms of maneuver, tactical mission tasks, and arrangement and choice of control measures."[7] Note, in particular, the description of the art of tactics—"decisionmaking under conditions of uncertainty when faced with an intelligent enemy"—for this is almost a direct link between tactics and asymmetry.[8]

Tactics vary constantly with the situation. There is no playbook of tactical solutions; the tactics manual only offers a menu from which to choose. Tactics are employed against an asymmetric opponent in the course of combat, but there can be no set of tactics checklists for asymmetric warfare, since each application is unique. Tactics are whatever we do against an asymmetric opponent when we arrange forces to counter that opponent. What differentiates tactics against an asymmetric opponent is that we might not have ever used that particular combination of options before, or we might have to incorporate new and novel options to counter asymmetry. When confronted by a situation, leaders must choose from a variety of possible solutions and adapt their solution to circumstances at the point of engagement.

**Techniques and procedures.** Techniques are the general, detailed methods troops and commanders use to perform assigned missions and functions, specifically methods of using equipment and personnel. Procedures are standard and detailed courses of action that describe how to perform tasks. Techniques and procedures, the lowest level of the broad term doctrine, are internal to the force. They are specialized to particular types of units based on organization, equipment, and environment.[9] This is the standard operating procedures (SOP) level of warfare, or as the Marines refer to it, the "technical" level of war. Techniques and procedures are a standard of operating instilled through training.

The adage that forces "fight as they train" is applicable. Armies cannot afford to make everything up as they go. Of necessity we apply existing techniques and procedures against asymmetric opponents, and with some adaptation, they work. In other cases, if there are no existing techniques and procedures, and innovative combinations of existing techniques and procedures will not work, we develop new techniques and procedures to integrate into existing ones to solve a unique problem. If it appears the situation that prompted the change might recur, we must tell other forces about the solution so they do not have to learn from bitter experience. One would believe that U.S. Army soldiers in Afghanistan are still adapting and applying the drills and

US Army

7th Infantry Division troops use a flamethrower to rout out Japanese snipers on Kwajalein, February 1944.

***Marines and soldiers developed specialized drills for eliminating Japanese caves and underground fortifications during the war in the Pacific. Making changes to techniques and procedures that will be effective across the force requires experimentation, training, and dissemination. These actions are part of the adaptive nature of combat.***

SOPs they learned before they deployed.

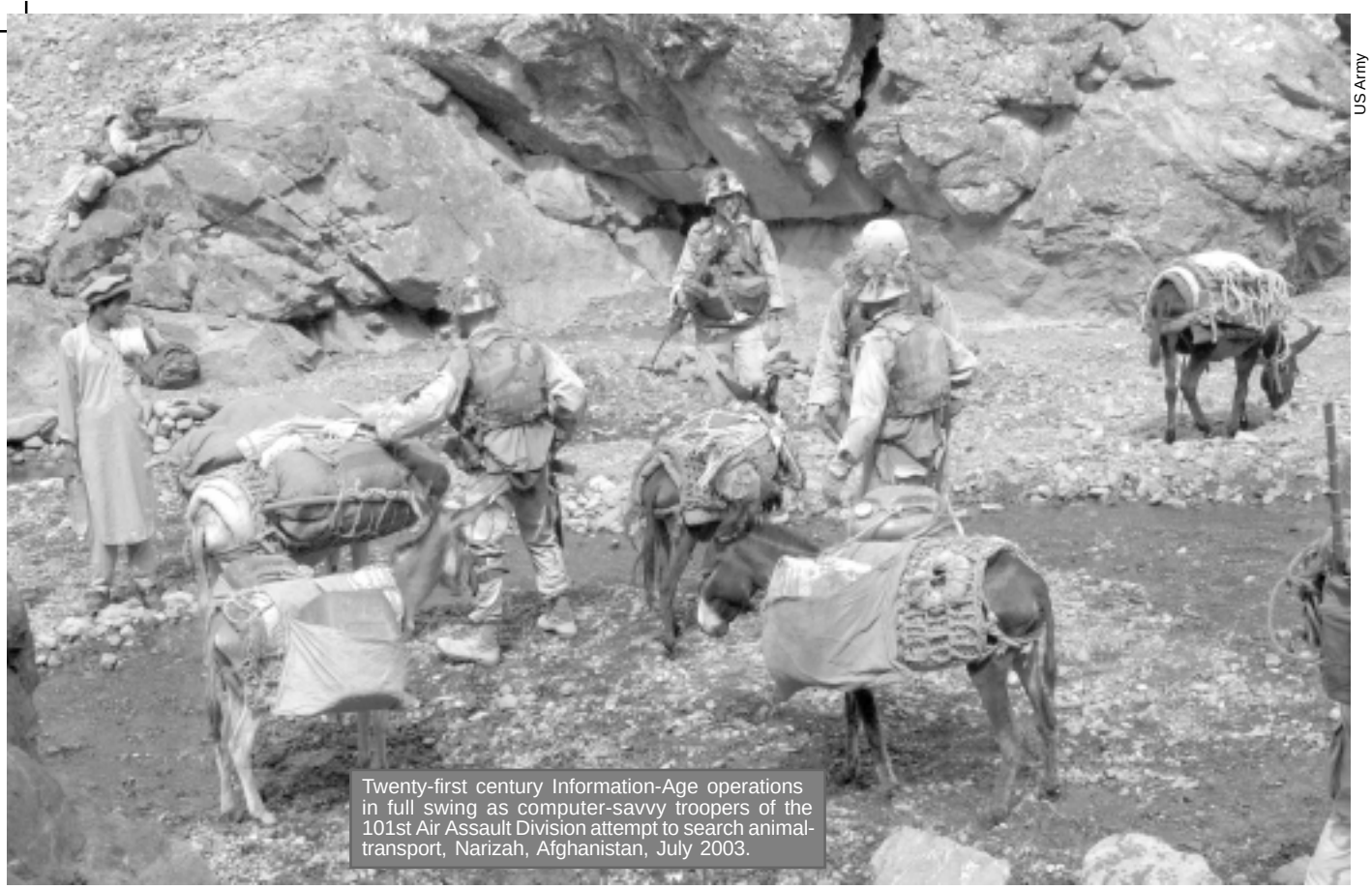
Every competent military force adapts. Units modify techniques and procedures constantly according to circumstance and knowledge gained through experience. This is certainly not new or unique to dealing with dissimilar opponents. When confronted with anti-handling devices on mines and other booby traps in Italy in World War II, the Army developed procedures for clearing and marking areas as well as specific techniques for disarming the devices. Similarly, Marines and soldiers developed specialized drills for eliminating Japanese caves and underground fortifications during the war in the Pacific. Making changes to techniques and procedures that will be effective across the force requires experimentation, training, and dissemination. These actions are part of the adaptive nature of combat. Adaptation is critical to military success, since warfare, whether asymmetric or not, deals with uncertainty.

## Uncertainty and the Unexpected

German military theorist Carl von Clausewitz noted that uncertainty is fundamental to warfare.[10] To some greater or lesser degree, uncertainty might be lessened as a function of improved command and control and intelligence, but as events demonstrate in Afghanistan and indeed in every conflict in which America has fought, it cannot be eliminated. Uncertainty is an enduring facet of warfare and arises from—

- A lack of intelligence about enemy intentions, such as whether or not Saddam Hussein's intent was to attack Saudi Arabia.
- The timing, location, or even the existence of a plan of attack, such as the German Ardennes Offensive.
- The effectiveness or even existence of a new weapon, such as the Type 93 Torpedo.
- The development of a new form of warfare, such as the blitzkrieg.

Some would argue that uncertainty, as a function of asymmetry, has increased with the spread of technology and the juxtaposition of conflicting aims, not only between nation-states, but also between nonstate actors. Certainly evidence exists that the potential for asymmetric operations increases as a function of the number of potential conflicts and combinations of opponents, technical means, cultural



US Army

Twenty-first century Information-Age operations in full swing as computer-savvy troopers of the 101st Air Assault Division attempt to search animal-transport, Narizah, Afghanistan, July 2003.

***We have assimilated and adopted ideas from Jomini, Clausewitz, Fuller, and others who explain the phenomena of combat. Added to this collection of principles and classical theory are things like battlefield operating systems and battlespace. But, have we really examined the nature of 21st-century operations and the theoretical implications? To what extent is current frustration with asymmetric opponents and operations the product of industrial-age theory attempting to direct Information-Age operations?***

perceptions, and values. Potential opponents understand that picking a conventional fight with U.S. forces is tantamount to suicide. As the potential for asymmetry increases, so does the level of uncertainty and the potential for tactical, operational, and strategic surprise.

Asymmetry is really nothing more than taking the level of uncertainty, or surprise, to a new level that involves novel ways, means, or even ends. From a doctrinal perspective, our response is the same, whether the enemy's asymmetry is a low-level tactical innovation or a completely novel strategic approach. We must be astute enough to recognize that something has changed and then be flexible enough to create an effective response. Doctrine must facilitate this.

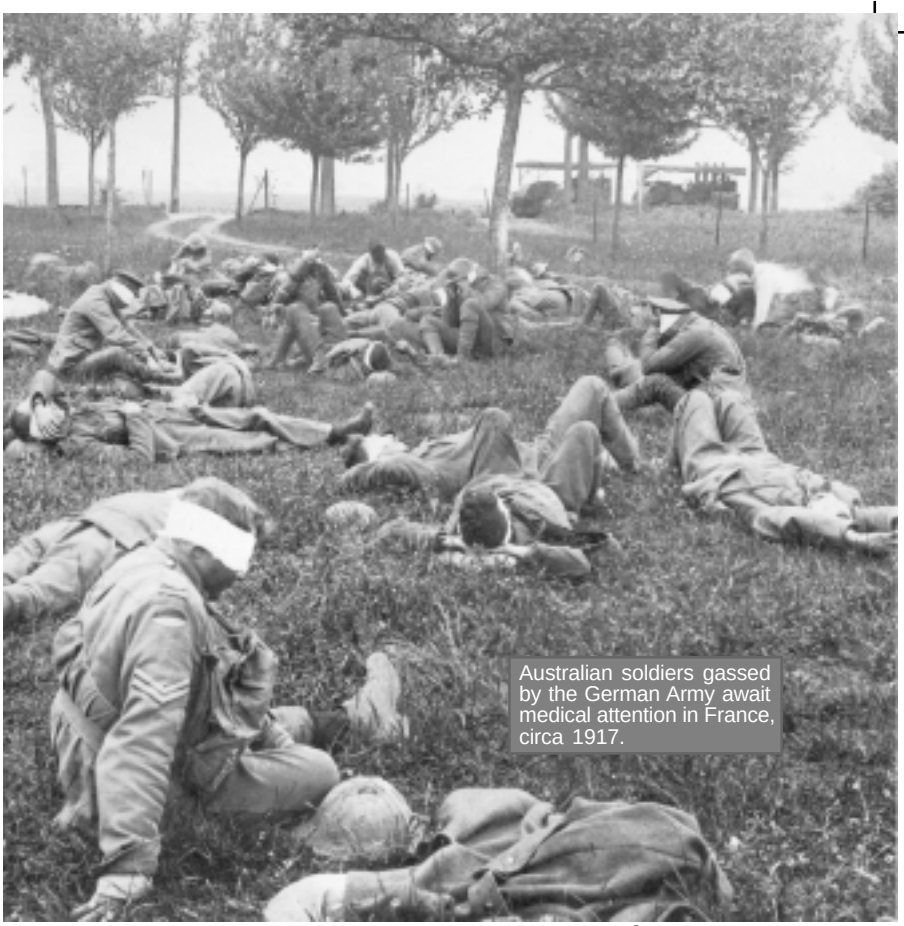
Dealing with the unexpected requires rapid adjustment to the actual situation. To the degree that doctrine becomes overly proscriptive, it becomes irrelevant. Worse, it instills in the service a penchant for proceeding by the book whether warranted by circumstances or not. World War II Chief of Naval Operations Admiral Ernest King warned against this in 1940 when he said, "There will be neither time nor opportunity to do more than prescribe the several tasks of the several subordinates. . . . If they are reluctant to act because they are accustomed to detailed orders and instructions—if they are not habituated to think, to judge, to decide and to act for themselves. . . , we shall be in sorry case when the time of active operations arrives."[11] Doctrine must embrace a philosophy of initiative and creative thinking to counter uncertainty. The more asymmetric the opponent, the more important this is. Training must complement a philosophy of operations that emphasizes uncertainty. Training doctrine must stress soldiers and leaders by putting them in unfamiliar circumstances and forcing them to think creatively.

To remain relevant, doctrine must recognize the elements of uncertainty and the unexpected. Of course, doctrine cannot predict the unexpected, yet it must go further than banalities. Doctrine must offer the educational foundation and the tool set required to comprehend and effect successful operations, not in spite of but because of their increasing asymmetric nature. Imparting the tool set is a function of training, education, and self-study. Applying the tools is a function of leadership. Army doctrine

should embody a philosophy of operations that recognizes uncertainty as a fundamental aspect of warfare. Doctrine must illustrate the adaptive nature of a thinking, willful opponent and stress the absence of prescription in doctrine. But, doctrine cannot stop there.

## Initiative and Adaptation

An enduring lesson that doctrine must emphasize is that warfare is about adaptation when confronting asymmetry. Examples of asymmetry and adaptation to it can be found in insurgency warfare and the development of counterinsurgency forces and doctrine. At a tactical level, we can see the effects of the machinegun, accurate indirect artillery, and barbed wire during World War I. We can study the development of storm tactics and the armor with which to counter them. We can analyze U.S. air attacks on the Serbs in Kosovo and appreciate the Serbs' deception and camouflage tactics.



Australian soldiers gassed by the German Army await medical attention in France, circa 1917.

Australian War Memorial

***Military history provides numerous examples of the failure to exploit advantages gained through asymmetry. The British use of tanks at Cambrai in 1917, the German use of chlorine gas in 1915 at Second Ypres; the Union failure at the Crater at Petersburg in 1864; and our inability to couple our asymmetric mobility through helicopters in Vietnam to a corresponding strategy. Such case studies involve the application of asymmetric means that failed to achieve operational or strategic success.***

The Army's experience at the height of the Indian wars is illustrative. The plains Indians were nomadic tribes who employed guerrilla tactics against Army units. The Indians' skill and mobility allowed them to strike swiftly and elude pursuit. Army units lacked the mobility and intelligence to force the Indians into a set-piece engagement where Federal forces could apply superior firepower. General George Crook studied the relative strengths of opposing forces and concluded that the Indians lost their mobility in winter because they could not move far from their camps. By substituting hardier mules for horses, Crook could operate over extended distances in winter and, thus, was able to attack the Indians in their remote winter camps. With their camps destroyed, the warrior bands had little choice but to move to the reservations or starve.[12]

Crook's solution was not a case of developing exotic technology to solve a military problem. What was critical to success was the conscious selection from the available tools to fit the situation. Crook recognized that during the "campaigning season" the Indians had an asymmetric advantage that the U.S. Army could not easily overcome. He countered by recognizing that the Indians had a corresponding weakness during the winter. He developed an asymmetric approach that the Indians, in turn, could not counter. The means selected emphasized relative strengths and complementary means to protect weakness. Crook did not rewrite Army doctrine; he adapted his forces to execute doctrine in new ways. We must demand this kind of creative thinking and initiative from our leaders.

As we write doctrine for an era of asymmetry, we must recognize the necessity of countering the asymmetry that potential and actual adversaries practice, and we must adapt our asymmetric capabilities to capitalize on things to which the enemy cannot easily respond. This is important because the U.S. military has an immense array of asymmetric capabilities, which are worthless if we cannot apply them effectively.

Military history provides numerous examples of the failure to exploit advantages gained through asymmetry. The British use of tanks at Cambrai in 1917, the German use of chlorine gas in 1915 at Second Ypres; the Union failure at the Crater at Petersburg in 1864; and our inability to couple our asymmetric mobility through helicopters in Vietnam to a corresponding strategy. Such case studies involve the

application of asymmetric means that failed to achieve operational or strategic success. While military experts might debate details, for purposes of measuring doctrine, we must understand that asymmetric action could have second- and third-order effects that superficial study might not reveal. These and other examples also emphasize the rapidity of adaptation and the fleeting opportunity for exploitation that might follow.

***[General George Crook] concluded that the Indians lost their mobility in winter because they could not move far from their camps. By substituting hardier mules for horses, Crook could operate over extended distances in winter and, thus, was able to attack the Indians in their remote winter camps. . . . He developed an asymmetric approach that the Indians, in turn, could not counter.***

## Characteristics of Effective Doctrine

Effective doctrine in an era of increasing asymmetry must have the following characteristics:

- Doctrine must have an operational concept that includes more than high-intensity conventional warfare. In an era of conventional American superiority, opponents are unlikely to try to match our strengths and fight symmetrically. However, this is only an advantage as long as we maintain the capability. If we delete a capability, then we must replace it with something that can counter any similar enemy capability, or we will be left with an area of vulnerability.
- Doctrinal philosophy must emphasize the forecasting, vice predictive, nature of doctrine. As the Army's doctrine producers, we must forecast future operations. Like a weather forecast, ours should be a reasonably accurate assessment in the near term, less so over extended time. We must provide an articulate, succinct discussion of why things happen in combat (theoretical, historical, and empirical), so leaders and soldiers can understand the forecast's basis.
- All doctrine has to emphasize creativity and preparedness to deal with an adaptive, cunning, and typically asymmetric enemy. Doing so requires stating the problem and identifying the best available remedy—disciplined leader initiative from the highest to the lowest levels of command.
- Doctrine must educate the Army to the fact that military actions often have second- and third-order effects (the law of unintended consequences). Opportunity for unintended consequences increases with uncertainty and, in some linear fashion, with asymmetry. Army doctrine must treat asymmetry as a two-sided street. In military capabilities, U.S. forces might be the most asymmetric military force in history, if one enumerates specific capabilities and then seeks their equivalent in other armed forces around the globe. Doctrine must emphasize U.S. strengths and how to capitalize on them, applying them asymmetrically.
- Doctrine must include a system able to rapidly reassess current TTP against emerging threats, capture innovative solutions to new tactical problems, and promulgate new TTP to the field. The Center for Army Lessons Learned (CALL) already has something that does this fairly well. CALL actively and regularly collects lessons learned in the form of new and modified TTP and produces and disseminates reports that capture new TTP. We need to support this effort and improve its already superb ability to get the word out quickly.

## Promulgating New Doctrine

Where do we stand right now in terms of Army doctrine for operations against increasingly asymmetric opponents? The June 2001 version of FM 3-0, *Operations*, as the Army's keystone doctrine, sets the stage for more specific doctrine.[13] The manual, which differs from its predecessors in that it is written from the perspective of dominant U.S. power, recognizes that U.S. dominance stimulates asymmetric assaults on U.S. forces and interests. The manual offers an operational concept constructed around offensive, defensive, and stability and support operations. This focus is quite distinct from the strong focus on warfighting in earlier manuals.[14] The manual emphasizes subordinate initiative and the potential for advanced technology to complement individual initiative. The manual also initiates exploration of operational concepts such as noncontiguous operations that might reinforce U.S. asymmetric strengths. Thus far, we believe, the manual has successfully anticipated the environment and types of operations occurring in Afghanistan and elsewhere. Where the next operations manual might need emphasis lies in the presentation and understanding of second- and third-order effects associated with asymmetric land operations, and that should be predicated on a thorough review of military theory.

Field Manual 6-0, *Command and Control*, now awaiting approval, should advance the climate of subordinate initiative even as the technical means of control improves.[15] The manual's fundamental premise is mission command defined as "the conduct of military operations through decentralized execution based upon mission orders for effective mis-

sion accomplishment. Successful mission command results from subordinate leaders at all echelons exercising disciplined initiative within the commander's intent to accomplish missions. It requires an atmosphere of trust and mutual understanding."[16] Field Manual 6-0 and FM 3-90 stress creative thought in applying current TTP to new situations, and they highlight that some situations will require entirely new TTP for effective solutions.[17] While this might suitably frame the doctrinal premise for leadership adapted to increasing asymmetry, it does not by itself guarantee that training and operations reflect the concept. That remains a collective challenge for the Army.

Having a body of doctrine suited to the contemporary operating environment is not sufficient. Where we need to improve is in promulgating new doctrine in the field and in the Army's educational centers. Electronic publishing and Internet distribution can make doctrine available faster than ever, but they cannot get individual users to read and study it. A humanistic program of education, professional development, and assimilation is still necessary.

When considering the implications for increasingly asymmetric operations, we need to initiate a comprehensive review of the basic theories that underpin doctrine. Today's doctrine traces its antecedents back to the study of military operations in the aftermath of the great European wars, particularly the Napoleonic Wars and World War I. We have assimilated and adopted ideas from Jomini, Clausewitz, Fuller, and others who explain the phenomena of combat. Added to this collection of principles and classical theory are things like battlefield operating systems and battlespace. But, have we really examined the nature of 21st-century operations and the theoretical implications? To what extent is current frustration with asymmetric opponents and operations the product of Industrial-Age theory attempting to direct Information-Age operations? Are there indications that older doctrinal concepts are becoming invalid? This is not to decry and expunge all current military theory and concept, since much might still be valid. But, we cannot be certain until we undertake a comprehensive study of current operational theorems and recent operational experience. What we cannot afford is to be drastically wrong or to engage with a doctrine that has no valid answers for asymmetric challenges. In an era of asymmetry—

***Dealing with the unexpected requires rapid adjustment to the actual situation. To the degree that doctrine becomes overly proscriptive, it becomes irrelevant. Worse, it instills in the service a penchant for proceeding by the book whether warranted by circumstances or not.***

- Doctrine must create flexibility of thought and action by stressing the creative application of force.
- Doctrine must be predicated on uncertainty and not tied to prescriptive solutions to problems.
- Doctrine must be constantly reviewed at all levels to ensure we retain the useful concepts and throw out those rendered useless by opponents.
- Doctrine must capitalize on our asymmetric advantages. ***MR***

**NOTES**

1. J.F.C. Fuller, *The Foundations of the Science of War* (Fort Leavenworth, KS: U.S. Army Command and General Staff College Press, 1993), 254. Reprinted from the original 1926 edition.
2. The development of Navy gunnery computers allowed the U.S. Army Air Corps to perfect the famous Norden bombsight and provided some of the stimulus for electronic computers developed later in World War II.
3. For more information about the Type 93 61-centimeter (24-inch) diameter torpedo, see Department of the Navy, U.S. Navy Historical Center, on-line at <www.history.navy.mil/photos/events/wwii-pac/guadlcnl/guadlcnl.htm>. See also *Joint Forces Quarterly,* on-line at <www.dtic.mil/doctrine/jel/jfq_pubs/2120.pdf>. For comparative performance figures see table on-line at <www.microworks.net/pacific/battles/java_sea.htm>.
4. U.S. Joint Publication 1-02, *Department of Defense (DOD) Dictionary of Military and Associated Terms,* on-line at <www.dtic.mil/doctrine/jel/new_pubs/jp1_02.pdf>.
5. Examples from recent Army manuals include "active defense" (FM 100-5, *Operations* [Washington, DC: Government Printing Office (GPO), 1976]); "AirLand Battle" (FM 100-5, *Operations* [Washington, DC: GPO, 1982]); "full-dimensional operations" (FM 100-5, *Operations* [Washington, DC: GPO, 1993]); and "full-spectrum operations" (FM 3-90, *Tactics* [Washington, DC: GPO, 2001]).
6. FM 3-0, par. 2-12.
7. FM 3-90, *Tactics* (Washington, DC: GPO, 4 July 2001), pars. 1-12 and 1-13.
8. Ibid.
9. Ibid., par. 1-13.
10. The actual passage reads, "War is the realm of uncertainty; three-quarters of the factors on which action in war is based are wrapped in a fog of greater or lesser uncertainty" (Carl von Clausewitz, *On War,* Book Two, *On the Nature of War,* chap. 6).
11. Admiral Ernest King quoted in FM 6-0, *Command and Control,* DRAG ed. (Fort Leavenworth, KS: Combined Arms Doctrine Directorate). At the time he made the statement in 1940, King was a battleship force commander. He became Commander in Chief of the Atlantic Fleet before President Franklin D. Roosevelt appointed him Chief of Naval Operations. The actual quote is from Thomas B. Buell, *Master of Sea Power: A Biography of Admiral Ernest J. King* (Boston: Little, Brown, 1980).
12. History of the Army in the Indian Wars, U.S. Army Center of Military History, on-line at <www.army.mil/cmh-pg/books/AMH/AMH-14.htm>. See also Indian war campaign summary, U.S. Army Center of Military History, on-line at <www.army.mil/cmh-pg/reference/iwcmp.htm>.
13. FM 3-0.
14. See the FM 100-5 manuals.
15. FM 6-0.
16. FM 6-0, GI-5.
17. FM 6-0 and FM 3-90.

*Colonel Clinton J. Ancker III, U.S. Army, Retired, is Director, Combined Arms Doctrine Directorate (CADD), U.S. Army Combined Arms Center (CAC), Fort Leavenworth. He received a B.S. from the U.S. Military Academy; master's degrees from Long Island University, Stanford University, and the Naval War College; and he is a graduate of the U.S. Army Command and General Staff College (CGSC). He has served in various command and staff positions in the continental United States (CONUS), Vietnam, Kuwait, and Albania, where he was Chief, USEUCOM, Military Liaison Team.*

*Lieutenant Colonel Michael D. Burke, U.S. Army, Retired, is a Military Analyst, CADD, CAC, Fort Leavenworth. He received a B.A. from the University of California, Los Angeles, and master's degrees from Long Island University and CGSC. He has served in various command and staff positions in CONUS, Germany, Korea, and Southwest Asia.*

# Al-Ikhwan Al-Muslimeen: The Muslim Brotherhood

WITHOUT CLOSELY examining *Al-Ikhwan al-Muslimeen* (the Muslim Brotherhood) founded in Egypt in 1928, it is impossible to try to understand modern Islamic radicalism. Al-Ikhwan was the first of its kind to politicize Islam within the context of the colonial age and the first to put into practice the theories of Salafist thinkers such as Jamal-al-Din al-Afghani and Muhammad Abduh. These two Muslim revivalists, who wrote and preached during the beginning of the 20th-century, espoused that Islam and modernity are compatible and that Muslims lack control over their destinies because they have fallen into fatalism, abandoning the quest for understanding. According to Al-Afghani and Abduh, falling away from their true faith has made Muslim lands vulnerable to Western colonialism.

From the Muslim Brotherhood ranks came Sayed Qutb, who wrote the jihadist pamphlet *Ma'alim* (Guideposts), and many members of the more militant Gammaa al-Islamiya (The Islamic Group) and Al-Jihad as well as Al-Takfir wal-Hijra (Excommunication and Migration). Most leaders of these militant organizations and their members were once members of the Brotherhood. The history of the Brotherhood is intertwined with the events surrounding Egypt's 1952 founding as a Republic.

Al-Ikhwan members once included the late Mohammed Atef, Osama bin-Laden's military commander, and Ayman al-Zawahiri, Al-Qaeda's political ideologue. The question for those studying Islamic terrorism is, "To what extent did the Muslim Brotherhood influence the suicide bomber Muhammad Atta and the blind cleric Shiekh Omar Abd-al-Rahman?"

## Understanding Hasasan-Al-Banna's Egypt

Hassan-Al-Banna, born in 1906 in the delta town of Mahmudiya, saw an Egypt completely dominated by England. By 1919 he was participating in nationalist protests. He and his family witnessed nationalist leader Saad Zaghloul calling for the withdrawal of the British and the granting of independence to Egypt. British high commissioners in Cairo, including the distinguished commissioner Lord Horatio Kitchener, had governed the country since 1882. Despite being granted independence in 1922, Egypt retained a de facto British high commissioner, who continued to dictate policy to King Fouad and his son King Farouk. England continued to treat Egyptians with contempt, using such racial epithets as "gyppos" and "camel jockey," words that originated with British and Australian troops serving tours of duty in Egypt. Egyptians have typically been weaned on stories of English domination, some real, others exaggerated. One such story is about an English hunter shooting pigeons on an Egyptian

farmer's property. The farmer, seeing the birds he raised for food being killed, tried to persuade the hunter to stop. The hunter refused to acknowledge the farmer, so the farmer struck the Englishman, killing him. In relaliation, British troops razed the village, causing many deaths and casualties. Today, this town is called Damanhour (Flowing Blood) in commemoration.

Al-Banna's childhood education consisted of an Islamic elementary education and learning watch repair, his father's craft. His father, a graduate of Al-Azhar University, was the village's Islamic leader. At the age of 12, Al-Banna was enrolled in primary school and began his association with Islamic groups. He also became a member of the Society for Islamic Morality, whose members were to adhere to a strict code of Muslim behavior, with fines imposed on those who cursed, drank, or smoked. This evangelism expanded to include a membership in the Society for Preventing the Forbidden. At 16, Al-Banna attended Dar-al-Ulum, an Islamic teacher's training college in Cairo where he focused his studies on Tawheed (theology), Fiqh (jurisprudence), Arabic literature, and Kalam (modern Islamic ideology or theosophy). The Hasafiya Order of Sufism also attracted Al-Banna because of its strict observance of scripture, rituals, and ceremonies. He found a sense of cause and importance in joining the order, and he became its secretary, handling charitable social needs. However, his activities were limited to upholding Islamic standards and imposing them on others.

During his 5 years in Cairo, Al-Banna saw Egypt's secular culture as immoral, decadent, and atheistic. He was alarmed also by the reforms of Kemal Attaturk, who abolished the Caliphate. Al-Banna worried that the 1925 establishment of secular Egyptian universities was the first step toward a Turkish-style abandonment of Islam.[1]


Hassan-Al-Banna

Al-Banna, finding like-minded men at his school and other universities, came under the influence of Sheikh Al-Dwijiri, who argued that Al-Azhar clerics were not capable of stemming the tide of Western influence. This idea was not new; it reflected the writings of Muhammad Abduh, saying that the Al-Azhar clergy were corrupt agents of the government and that any cleric who helped maintain colonial rule was to be considered illegitimate. The most influential person in Al-Banna's life, however, was Sheikh Muhibb al-Din Khatib, a Syrian reformer who ran the Salafiya Library and helped found the Young Muslim Men's Association. From Khatib, Al-Banna learned elements of organizing the masses and mobilizing disaffected youth.[2] Al-Banna graduated from Dar-al-Ulum in 1927 and proceeded to teach at a post in the port city of Ismailiah.

## Al-Banna and the Muslim Brotherhood

In Ismailiah, a town on the Suez Canal, Al-Banna's influences caught up with him as he witnessed the exploitation of Egyptian workers by foreigners who ran the Suez Canal Company. In response, Al-Banna and his colleagues founded Al-Ikhwan al-Muslimeen. He declared that Egyptian poverty, powerlessness, and lack of dignity resulted from failing to adhere to Islam and adopting Western values and culture. "Islam hooah al-hal" (Islam is the solution to all Egyptian and mankind's ills), a buzzword still uttered today, represents a frustration with socialism, capitalism, and a democracy manipulated to favor the ruling party.

The first 10 years of Al-Ikhwan activities focused on recruiting and establishing branches throughout Egypt. Al-Banna called for a constitution derived from the *Quran* and *Sunnah*, as well as the precedents set forth by the first four rightly-guided Caliphs. He wanted the abrogation of secular law and

the introduction of Islamic law as the law of Egypt. Another aspect of Al-Banna's message was the prohibition of vices such as gambling, prostitution, usury, monopolies, books, and songs, as well as ideas not conforming to Islamic law. Although Al-Banna preached pan-Islamism, he was not opposed to pan-Arabism and Egyptian nationalism. In his pamphlet *Diary of Dawa and Dai'iah*, Al-Banna clearly outlines the early years of the organization saying, "I prefer to gather men than gather information from books."[3] He emphasized building the Ikhwanic organization and established internal rules to keep it going beyond his lifetime.[4]


Hassan-Al-Banna

## Al-Ikhwan under Kings Fouad and Farouk

In 1936, Al-Banna sent a letter to King Farouk and Prime Minister Nahas Pasha encouraging them to promote an Islamic order. That same year Egypt signed the Anglo-Egyptian Treaty, giving more control and autonomy to local governments. By 1938 Al-Banna called on King Farouk to dissolve Egypt's political parties because of their corruption and the division they caused within the country.[5] The Brotherhood's tactics began to change from working within the system to advocating an armed revolutionary struggle to facilitate change.[6] Today, the debate on whether Islamists should work within the system or propagate violence continues within Ikhwan ranks, a debate that has led to the creation of such splinter groups as Gamaa al-Islamiya and Tanzeem al-Jihad.

As early as 1940, guerrilla training camps were established in the Mukatam Hills that overlook Cairo as well as in areas in southern Egypt, with members of the Egyptian officer corps (some affiliated with Nasser's Free Officers' Movement) providing training. So organized was the Brotherhood's militant wing that during the 1948 Arab-Israeli War there was an increase in the types of weapons in its arsenal. That same year several thousand Ikhwan members fought in the Arab-Israeli conflict, increasing the organization's stature and recruiting ability and further cementing its relationship with the Egyptian Army.

When the Brotherhood began, it included political, educational, and social arms. The organization added a militant arm during World War II and established an Ikhwan quasi-judiciary that issued fatwas against those who were judged to have betrayed faith and country. Once the judiciary arm condemned a person, the Brotherhood's militant arm carried out the sentence. Brotherhood activities also included the 1948 bombing of the Circurrel Shopping Complex and the assassinations of internal security officials, Judge Ahmed Al-Khizindaar, and Prime Minister Noqrashi Pasha. In retaliation, King Farouk's internal security apparatus assassinated Al-Banna in 1949, but the Brotherhood endured and has since become intertwined in Egyptian domestic politics.

## Ikwan under Nasser

Anwar Sadat played a pivotal role in bringing together the Brotherhood and members of the Free Officers' Association. As early as 1946, he saw that the two groups had common aims (the overthrow of the monarchy blamed for the military failure in Palestine) and that the recruitment of officers and infiltration of troops was redundant and often divisive.

When Nasser finally met Al-Banna in 1948, Nasser convinced Al-Banna that gaining a wide base of support among the military through his Free Officers and uniting secular and Muslim officers under the banner of Egyptian self-rule would be more constructive and lead to a quicker revolution than a purely Islamist one. Once liberated, Egypt could determine the best way to govern the country.[7]

Nasser succeeded in overthrowing the monarchy in July 1952 and, with the help of the Muslim Brotherhood, hoped to steer a course toward an Islamic government. But the Brotherhood was rebuffed when Nasser offered it only a ministerial post in the Awqaf (religious endowments) and an appointment to the post of Mufti of Egypt. A deterioration of the relationship between Nasser and the Ikhwan ensued. Nasser's decision to set aside the Brotherhood had much to do with the Coptic Christian and Mus-

lim secular members of his Free Officers' Association who did not espouse Al-Banna's vision of an Islamic Egypt.[8] Perhaps surprisingly, the Ikhwan talked directly with the British Embassy in an effort to find common ground in destabilizing Nasser's regime, which both France and England saw as being hostile toward them.

During Nasser's regime, many Brotherhood members were driven underground, and thousands were jailed. Ikhwan writings show that the level of its persecution under Nasser was greater than what they endured during the monarchy. Qutb, influenced by Al-Banna, wrote *Guideposts* during Nasser's reign and formulated his ideas for militant Islam in the jail cells of Nasser's Egypt. Another side-effect of Nasser's crack-down of the Ikhwan involved the dispersal of members to neighboring Arab countries like Saudi Arabia. It was during this time that the strict Wahabi strain of Islam was infused into Ikhwan ideology.

Sayed Qutb's *Guideposts* argues that leaders should be accepted not merely because they are Muslim. They must be selected by the Ummah, and the selected leader must be just, void of corruption, and not an oppressor. Qutb saw Nasser's experimentation with socialism as leading the nation toward heresy. Qutb was executed on the gallows of Tura Prison in 1966.[9]

Like Al-Banna, Qutb's message left an important legacy for militant groups. Muhammad Faraj, another member who split off to become a founding ideologue of Gamaa al-Islamiyah, was, like Qutb, influenced by repression and corruption. In 1982 Faraj published *Al-Farida al-Ghaiba* (The Missing Obligation), referring to Jihad. Faraj writes that abandoning the holy war led Muslims to their plight. He characterized Hosni Mubarak's government as a neo-colonialist regime that had rejected as futile Ikhwan's efforts to work with the regime.

Relations between the Ikhwan and Egypt's regimes have been rocky, ranging from Nasser's suppression to Sadat's liberalism before Camp David but suppression after and finally, to complete suppression under Mubarak. The Ikhwan have also been influenced by Arab Afghans and have been a militant political voice of Islam in Egypt. Gamaa al-Islamiyah (The Islamic Group), established in 1979, and Al-Jihad loosely pursued the organization's militant agenda. To say the three are firmly connected would be an overstatement; they operate individually and collaborate occasionally when the political opportunity warrants.

## Ikhwan Ideologies

The Ikhwan, which has successfully infiltrated elements of the Egyptian Army and police, has also been successful in controlling lawyers', pharmacists', engineers', and doctors' unions in Egypt. The organization also recruits technical university specialists, which has been made easier by Mubarak's complete suppression of any political expression in the universities. In the 1950s and 1960s there were a variety of student unions that have disappeared under Mubarak's regime. Students are turning to the Brotherhood to express their discontent with government policies and the economy.[10] In *The Messages of Imam-ul-Shaheed Hassan Al-Banna*, Al-Banna characterizes the Ikhwan by highlighting the following principles that unite organizations modeled on the original Egyptian version:[11]

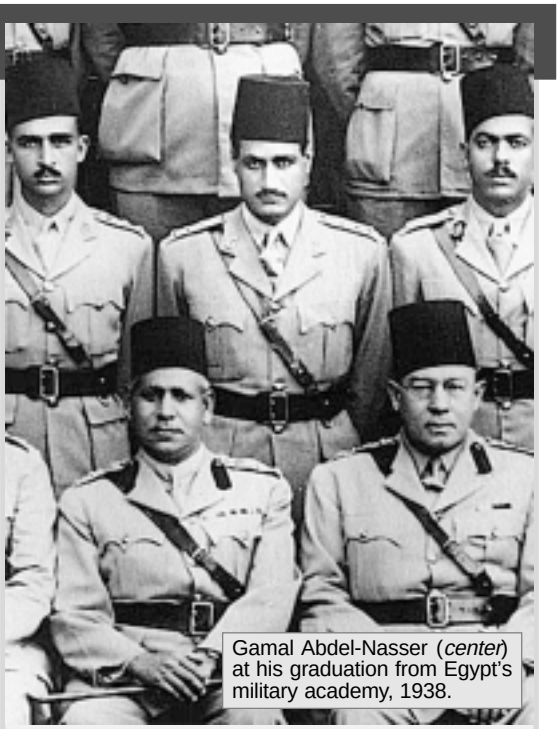
- Following the Salaf, a complete rejection of any action or principle that contradicts the Sunnah and Quran.
- Striving to implement the Sunnah in every aspect of public life. The Egyptian court system has been used successfully to bring suit against intellectuals and writers deemed heretics. The most famous case was that of Abu Ziad, an Islamic scholar, who was declared an apostate by the Court of Cassations. He was forced to divorce his wife and after repeated threats, he fled to the Netherlands. A climate created by the Ikhwan may have stimulated another tragedy, the 1994 stabbing death of Egyptian Noble Laureate Naguib Mahfouz.
- Increasing Iman (religiosity) by focusing on the purity of hearts.
- Working toward Islamizing the government and assisting in this goal outside the borders of Egypt within the Islamic world.
- Forming sports clubs and commiting members to a life of physical fitness.
- Enhancing the knowledge of Islam and the Shariah among Egyptians and others.
- Establishing a sound economic infrastructure through contributions of its members to sponsor Islamic schools, healthcare, and other projects.
- Fostering links with other Ikhwan within the Islamic world and beyond.[12]

These principles have found their way into the dialogues of modern leaders like Omar al-Telmessany, who ran the organization during Sadat's reign as well as into their newspaper *Al-Dawa* (The Call).

## Objectives

*Introduction to the Dawa of the Ikhwan al-Muslimoon* outlines the organization's main objectives. It begins with the self and ends with a united Islamist world in their image by advocating—

- Building the Muslim individual. Building an organized person, strong in body and mind, able to earn a living, correct in worship, and possessing a self-struggling character.
- Building the Muslim family. Choosing a proper spouse, educating children Islamically, and building a community network of family support groups.
- Building a Muslim society. Creating a society starting with individuals and families and addressing the problems of society honestly, realistically, and through open debate.
- Building a Muslim State. The Ikhwan publicly espouses that preparing a society for an Islamic government should be the first step toward Islamization. This means spreading Islamic culture, ideals, and policy through media, the mosque, and charitable works as well as through soliciting membership from public organizations like unions, syndicates, and student unions. This dogma is found in Ahmed Ar-Rasheed's, *The Path*.[13]
- Building the Caliphate. This means building a united Islamic world.
- Mastering the world of Islam. Muslims should control their own destiny within Dar-ul-Islam (The Abode of Islam).



Gamal Abdel-Nasser (*center*) at his graduation from Egypt's military academy, 1938.

## Methods of Education (Tarbiah)

Once a person becomes an Ikhwan member he participates in weekly study units known as Halaqas. There are also monthly Katibah in which several Halaqas from various enclaves and villages meet to discuss political and religious affairs. There are also trips, camps, courses of study, Islamic workshops, and conferences that Ikhwan sponsors throughout Egypt and the Islamic world. Each member is given a schedule with established goals to complete that require the endorsement of key leaders. This description can be found in Ali Abd-al-Haleem's, *Means of Education of the Ikhwan al-Muslimoon*.[14]

As careful study shows, the Ikhwan have articulated goals, which resonate among Egyptian lower and middle-class societies. In addition, the education system is organized with the dual purpose of mass mobilization and control, much like a military unit.

In the realm of counterterrorism, there is much to be gained by careful analysis of the Ikhwan. For example, looking at the 10 principles of Al-Banna, number three states, "Assume first that you are wrong, not your Muslim Brother, and see how you find the truth impartially."[15] The 10th principle states, "Have sympathy for those who do not see the light; rather than being angry or expose their shortcomings, I never attacked my accusers or detractors personally, but rather sought God's help in making His message clearer to those listening."[16] Such phrases contradict Al-Banna's actions during the violent phase initiated in the 1940s. Armed with this information one can begin to isolate and delegitimize groups willing to work within Al-Banna's peaceful call and those wanting to resort to violence.

Sadly, the organization's current theme has been radicalized by Egyptian Ikhwan contact with Saudi radicals and is expressed in the last two of the five key phrases of the organization's pledge:

- Allah is our objective.
- The messenger is our leader.

- *Quran* is our law.
- Dying in the way of God is our highest hope.
- Jihad is our way.[17]

This was never part of Al-Banna's message. The counterterrorism challenge will be to foster the original message of working toward peaceful change as well as encouraging and acknowledging the social service provided to poor Egyptians. Integrating the elements that work with the government and its political system should be part of an aggressive counterterrorism strategy. There is blanket persecution of all Islamists by the Egyptian authorities, without truly delineating between violent militants and fundamentalists. Exploiting the ideological differences between those who want to express themselves politically through violence and others through peaceful means can be used to undermine those really dangerous militants.


Emblem of the Muslim Brotherhood (Al-Ikhwan Al-Muslimeen) founded in 1928.

Egyptian democracy is eroding. Even as Mubarak tries to stem the challenge of the Muslim Brotherhood, the Ikhwan continues to dominate the lawyers', doctors', pharmacists', engineers', and journalists' unions known as niqabat. The government has stepped in to change the rules, which allowed Islamists to be legally elected into positions of authority. Law 93 of 1995, which would have allowed Egyptian authorities the right to arrest anyone publishing false news, was issued and then withdrawn. The journalist syndicate threatened a shut down and Mubarak bowed to public pressure. In 1995, the Mubarak regime manipulated the general elections for assembly seats by changing the wording of the election laws that resulted in mass arrests on the eve of the election. This undermined Muslim fundamentalists wanting to work within the system and empowered jihadists calling for a violent overthrow.[18]

The Muslim Brotherhood, inadvertently through dissent within its own ranks, spawned several militant groups. Group splits occurred as early as 1939 with the creation of the "Youth of Our Lord Muhammad Group," which denounced Al-Banna for his compromises with the Egyptian monarchy. In 1973, students aligned with the Brotherhood created Gamaa al-Islamiyah, which gained popularity on college campuses, but was suppressed by the government of Anwar Sadat.[19] Today, this group's militant and social affairs function is to bring an Islamic government to Egypt. By providing technical guidance through its philosophies and techniques, the Brotherhood has been a source of inspiration to other Islamic militants in the Arab and Muslim world, which makes it an organization worth tracking. Its history is one of sedition and violence. ***MR***

## NOTES

1. Arabic material cited in this essay represents LCDR Aboul-Enein's translations and understanding of the material; David Commins, "Hassan Al-Banna (1906-1949)," in *Pioneers of Islamic Revival*, ed. Ali Rahnema (London: Zed Books, 1994), 131-33.
2. Ibid.
3. Muslim Brotherhood Movement homepage, on-line at <www.ummah.org.uk/ikhwan>, accessed 14 April 2001.
4. The Muslim Brotherhood Movement Homepage seems to have been created in the United Kingdom, and the disclaimer illustrates that the maintainer of the page is not a member of the Ikhwan and does not approve or agree with everything it espouses. The page was created for educational purposes and has no connection to any organization. Nonetheless it is an excellent summary of Brotherhood objectives, themes, and history. No date or author appears on the website.
5. Commins, 131-33.
6. Mir Zohair Husain, *Global Islamic Politics* (New York: HarperCollins Publishers, 1995), 53-54.
7. Abdullah Imam, *Abd-al-Nasser wa Al-Ikhwan al-Muslimoon: Al-Unf al-Deene fee Misr* (Nasser and the Muslim Brotherhood: Islamic Violence in Egypt)(Cairo: Dar-al-Khiyal Printers, 1997), 83-90.
8. Ibid., 102-108.
9. Ibid., 92-97.
10. Saad Alfat, "Search into Education and Knowledge: The Ease of Influencing Young Minds," *Rose-El-Yossef*, 4 April 2002, 27.
11. Muslim Brotherhood Movement homepage.
12. Ibid.
13. Ahmed Ar-Rasheed, the *Path*, Muslim Brotherhood pamphlet, undated.
14. Ali Abd-al-Haleem, *Means of Education of the Ikhwan al-Muslimoon*, Muslim Brotherhood pamphlet, undated.
15. Hassan Al-Banna, "The Messages of Iman-ul-Shaheed Hassan Al-Banna," Muslim Brotherhood homepage, accessed 14 April 2001.
16. Ibid.
17. Muslim Brotherhood Movement homepage.
18. Denis J. Sullivan and Sana Abed-Kotob, *Islam in Contemporary Egypt: Civil Society vs. the State* (London: Lynne Rienner Publishers, 1999), 132-34.
19. Gilles Kepel, *Muslim Extremism in Egypt: The Prophet and the Pharaoh* (Los Angeles: University of California Press, 1985), 263-68.

*Lieutenant Commander Youssef H. Aboul-Enein, U.S. Navy, is a Middle East Foreign Area Officer currently serving in the Pentagon. For the past several years, he has been working with* Military Review *to bring Arabic topics of military interest to the pages of the journal. Aboul-Enein wishes to thank Midshipman 2d Class Samuel Boyd, a student of government at the U.S. Naval Academy for editing and providing technical help with this article.*

# The Leverage of Technology: The Evolution of Armed Helicopters in Vietnam

FEW MACHINES exemplify 20th-century technology like the helicopter. The complexity of a combat helicopter is phenomenal. Each airframe consists of thousands of parts that are machine-milled to precise specifications and operate in unison with little margin for error. To build a machine capable of sustained flight with rotating wings is remarkable in itself; to then use the machine in highly choreographed military operations ranks among the great accomplishments in modern warfare.

In the 20th century, the U.S. military embraced technology as a means of exploiting an advantage over enemy forces. In the Vietnam war, for example, the challenges of fighting a technologically inferior, unconventional enemy over a period of years provided a proving ground for technology-based weapons. Propelled by the urgency of war, the helicopter emerged as a major component of U.S. warfighting doctrine.

Introducing the helicopter as a means of leveraging technology shook the force structure of the U.S. Army to its foundation. Within the context of this transformation, the evolution of the armed helicopter is a revealing story.

## The Backdrop

Following the Viet Cong (VC) capture of Phuoc Vinh in September 1961, President John F. Kennedy sent Army Chief of Staff Maxwell Taylor to Saigon to evaluate the situation. Taylor observed that the Army of the Republic of Vietnam (ARVN) suffered from inadequate mobility. Mountains and jungle in the north-central regions and a maze of rivers in the Mekong Delta severely retarded the country's road infrastructure. The Kennedy administration moved quickly to overcome the problem, believing that providing ARVN forces with U.S.-piloted helicopters would shift the balance of the conflict. The arrival of 32 Army H-21s in Saigon on 12 December 1961 signaled the beginning of a new era in military aviation. The tempo picked up in April 1962 when the helicopter carrier USS *Princeton* began launching Marine Corps H-34 helicopters on missions into South Vietnam.[1] By the end of September 1964, the CH-21 had been supplanted with 250 UH-1s and 9 CH-37s.[2]

Meanwhile, Secretary of Defense Robert McNamara directed the Army to evaluate its aviation requirements. Following an introspective study, the Howze Board released a report in August 1962 that called for the establishment of the 11th Air Assault Division, which eventually merged with the 2d Infantry Division and was renamed the 1st Cavalry Division (Airmobile).[3] General Hamilton Howze based his vision for an airmobile division on large-scale conventional war planning, not the counterinsurgency role found in Vietnam. Howze saw the primary advantages of the airmobile forces as mobility, utility in delay operations, the ability to ambush conventional forces, and the ability to provide direct firepower.[4] The unification of helicopters and ground forces gave a single commander incredible maneuverability and firepower. For example, the 1st Cavalry arrived in Vietnam with 15,787 troops and 435 helicopters. Aircraft were divided among three battalions: the 228th received 48 CH-47s; the 227th and

229th each received 60 UH-1D "slicks" and 12 UH-1B gunships.[5] Howze's vision had a profound effect on operations in Vietnam.

## Helicopter Technology

When the United States entered the Vietnam conflict, the helicopter was a utility vehicle of marginal importance. By the end of the war, military commanders had integrated it into practically every type of mission. Significant design improvements occurred in the early 1960s that allowed operational commanders to expand the role of helicopters, which had become sophisticated war machines capable of performing diverse missions.

The armed services entered the helicopter revolution from different perspectives. The Navy was using helicopters for search-and-rescue missions and as antisubmarine warfare (ASW) platforms. The Army and Marine Corps were using helicopters largely for transporting supplies and ammunition. The Air Force was using them sparingly for personnel transport.

The intrinsic culture of the services in 1961 affected the design features of their respective helicopters. Weapons-system acquisition strategies were oriented around large-scale, conventional warfare. The Army pursued a mobile, decentralized, integrated structure that proved ideal for its tactical requirements. As a result, the Army acquired the UH-1 to replace the CH-21 in a cavalry role to support conventional mechanized units. The Marine Corps emphasized larger assault helicopters with centralized control under an air-wing commander.[6] Consequently, the Marines moved toward the larger H-34 to provide combat mobility for a self-sufficient assault force.

The workhorse for the Army until 1963 was the Piasecki H-21. The Army purchased 334 of the dual-rotor helicopters. H-21s were powered by 1,425-horsepower (hp) radial piston engines and could carry 20 soldiers.[7] In many ways, the H-21 was the test platform for the complexities of helicopter operation in a combat environment. Originally, the H-21 was unarmed and unarmored. One shortcoming of the H-21 was that it only had one small cabin door, which slowed the deployment or recovery of troops in the landing zone (LZ).

In the 1960s, The Sikorsky H-34 was well received by militaries around the world, and eventually more than 2,300 were built. Originally designed for the Navy as an ASW platform, production models of the H-34 were outfitted with gas turbine engines in 1960. This new engine was an important steppingstone in helicopter development. The British-built Napier Gazelle turboshaft engine produced 1,450-shaft horsepower (shp) at a reduced weight and fuel flow vis-à-vis a radial piston engine.[8] The Marine Corps ordered more than 500 H-34s (which they called the HUS-1) and used the airframe for some early gunship missions and virtually all of its troop transport missions until 1968.

***In the Vietnam war the challenges of fighting a technologically inferior, unconventional enemy over a period of years provided a proving ground for technology-based weapons. . . . Introducing the helicopter as a means of leveraging technology shook the force structure of the U.S. Army to its foundation. Within the context of this transformation, the evolution of the armed helicopter is a revealing story.***

In 1959, Bell Helicopter delivered the first production model of the HU-1A Iroquois to the Army. Renamed the UH-1A, the Army accepted the "Huey" because it balanced state-of-the-art technology with low maintenance and was adaptable to diverse missions. Excellent cockpit visibility combined with ample, accessible cabin space allowed pilots to spot ground threats and to maneuver in confined areas. A Lycoming T53-L-1A, 860-shp engine originally powered the UH-1As. Lycoming improved its turbo shaft engines throughout the 1960s to the extent that by 1970, it was installing 1,400-shp engines in new UH-1Es. The airframe's receptiveness to external modification was crucial to the evolution of gunship technology.

## Gunship Weaponry

The union of the M-60C, 7.62-millimeter (mm) machinegun with the UH-1 airframe gave birth to the legendary Vietnam gunship. The big breakthrough was the M6 armament subsystem, which integrated four M-60C machineguns into the airframe by pairing the guns on sliding mounts on either side of the cabin. Each gun carried 1,500 rounds and could be moved through an 80-degree horizontal arch and a 95-degree vertical arch.

The Army began arming UH-1As in mid-1962 with 2.30-caliber machineguns and 2.75-inch rocket launchers. This ordinance combination outlived the war because the maneuverable guns provided excellent suppression fire, while the rockets delivered a potent knockout punch. Helicopter firepower became especially formidable when six-barreled miniguns and rockets were mounted on durable UH-1Bs.

US Army

"Viking fire team" UH-1Bs of the 121st Assault Helicopter Company on a mission near Soc Trang, Vietnam, 1964.

***The Army accepted the "Huey" because it balanced state-of-the-art technology with low maintenance and was adaptable to diverse missions. Excellent cockpit visibility combined with ample, accessible cabin space allowed pilots to spot ground threats and to maneuver in confined areas. . . . The airframe's receptiveness to external modification was crucial to the evolution of gunship technology.***

When the Army upgraded to UH-1Cs in 1966, it transferred many UH-1B gunships to the Navy for use in the Mekong Delta. The Marine Corps filled three observation squadrons with Hueys in 1965, using the helicopters in a variety of roles. When armed with four forward-firing M-60s and two 19-round rocket packs, they flew escort, close air support (CAS), and forward air-controller missions.[9]

In September 1967, the first AH-1G Cobras arrived. By eliminating cabin weight, a Cobra could take on more ordnance. Furthermore, its sleek profile reduced target-aspect size and improved aerodynamic efficiency. Another enormously popular gunship concept (although short-lived) was the "Go-Go Bird." Not long after the CH-47 began operation, Boeing outfitted four of its aircraft as heavy gunships. Armed with twin 20-mm Gattling guns, 40-mm grenade launchers, and .50-caliber machine-guns, the heavy gunships were not graceful, but they boosted troop morale. From the infantryman's viewpoint, when the Go-Go Bird came, the enemy disappeared.[10] However, the aircraft were difficult to maintain as gunships and were reverted to transport duties.

Toward the end of the war, a surplus of air-to-ground helicopter weaponry was in-theater. Two examples of mature weapon technology were the M28A1 and M22 armament subsystems. Fully integrated into the AH-1G, the M28A1 turret contained a 7.62-mm Gattling gun and a 40-mm grenade launcher. When fortified positions or enemy armor were encountered, the Army used the M22 armament subsystem on UH-1Bs to deliver AGM-22B wire-guided missiles. Such diversity of weaponry had a synergistic technological advantage. In addition to giving operators potent weapons for specific threats, the M28A1 and M22 kept the enemy off balance because he never knew what ordnance to expect when he heard the telltale "wop-wop" sound of the Bell helicopter.

## Tactics and Countertactics

As offensive platforms, helicopters offer several unparalleled advantages. At first glance they appear highly vulnerable, lumbering noisily along at low altitudes. However, knocking one out of the sky is not a simple task. With self-sealing fuel bladders and a little bit of armor, helicopters are highly resistant to small-caliber weapons. The helicopter is the most maneuverable of all aircraft and when operated at low altitudes, can minimize its exposure to ground weapons by hiding behind terrain and ground obstructions. The helicopter's low, slow flight allows crewmen to see the finer details of ground activity while also giving them a view of the big picture. Shooting at a helicopter from the ground invites heavy return fire.

To reduce exposure to aerial observation, the North Vietnamese Army (NVA) and VC resorted to night operations, which essentially neutralized a portion of the United States' technological edge. To regain the initiative, the United States turned to improving night-fighting tactics by mounting night-vision devices and enormous spotlights in helicopters; however, it was the tactically proficient operators who enabled technology to re-command the fight. During Operation Lejeune in April 1967,

helicopters conducted Night Hunter operations almost every evening.

Lieutenant Colonel (LTC) Fred E. Karhohs, 2d Brigade Task Force, 1st Cavalry Division (Airmobile), developed night-fighting techniques to a high degree during the Night Hunter operation and later on the coastal plains of Binh Dinh. The operations used four helicopters: one acted as a lead and flare ship, while three unlighted helicopters sought targets of opportunity. As the lead ship dropped flares, door gunners in the next two helicopters, which flew at a higher altitude and at a distance from the flares, observed the ground with starlight scopes. After spotting the enemy, the gunners fired tracers to pinpoint the target, while the fourth helicopter opened fire with 2.75-inch rockets. This four-ship strategy was an effective technique for finding and killing the enemy and denying him one of his most valuable assets—the night."[11]

Yankee ingenuity in Indochina initially had a devastating effect on communist forces. The NVA had only marginal technological warfighting tools in the early 1960s, while their Southeast Asian collaborators—the VC, Pathet Lao, and Khmer Rouge—had virtually none. The enemy used stealth, cunning, and ruthless determination to overcome its technological disadvantage.

In an NVA document captured in 1962, two items stand out as a strategy for countering helicopter operations. The document stated, "The effectiveness of heliborne tactics is greatly reduced in forested and jungle-covered mountain areas where a clear knowledge of the nature of the terrain cannot be discerned from the air, where landings are difficult, and ambushes easily employed against the landings."[12] The document also stated, "A landing right within our position is the most effective, but also subject to coming under our firepower, while a landing outside of our position, though avoiding our firepower, loses the element of surprise."[13]

The 1st Cavalry Division demonstrated the concept of airmobility in November 1965 when it engaged regiment-size concentrations of NVA in the Ia Drang valley. Helicopter scouts accurately fixed enemy locations, while transport helicopters quickly moved rifle platoons to positions on the battlefield that cut enemy lines of communication.

Applying superior technology at Ia Drang had significant repercussions on both sides. It solidified U.S. General William Westmoreland's confidence in an attrition strategy. In the words of LTC Andrew Krepinevich, "The Ia Drang valley campaign represented the successful application of the attrition strategy. Here were large enemy formations willing to go toe-to-toe with the Americans, and their big units were being smashed by the Army's firepower and high-tech mobility."[14] Conversely, while the NVA inflicted severe casualties, the battle of Ia Drang taught them to avoid direct confrontations with U.S. forces. NVA commander Colonel Nguyen Huu An recollected the instructions he gave before the battle, "When you meet the Americans, divide into many groups and attack the column from all directions and divide the column into many pieces. Move inside the column, grab them by the belt, and thus avoid casualties from the artillery and air."[15] Acknowledging that large-scale conventional operations were not a viable option, Hanoi circumvented the United States' technological advantage by redirecting its effort to guerrilla warfare.

In the early stages of helicopter troop movement, the enemy attempted to disable troop-laden aircraft with small-arms fire as they slowed and descended into the LZ. Recognizing the CH-21's vulnerability

A pilot and crew chief with the 197th Aviation Company (Armed Helicopter) check their UH-1B's weapons system, circa 1965.

US Army

***When the Army upgraded to UH-1Cs in 1966, it transferred many UH-1B gunships to the Navy for use in the Mekong Delta. The Marine Corps filled three observation squadrons with Hueys in 1965, using the helicopters in a variety of roles. When armed with four forward-firing M-60s and two 19-round rocket packs, they flew escort, CAS, and forward air-controller missions.***

US Army

A UH-1B fires a 2.75-inch rocket in support of South Vietnamese troops.

***Acknowledging that large-scale conventional operations were not a viable option, Hanoi circumvented the United States' technological advantage by redirecting its effort to guerrilla warfare. . . . As the war dragged on, the enemy narrowed the technology gap. Not only did the enemy avoid conditions where U.S. forces could leverage technology, they also developed weapons and countertactics that challenged U.S. weaponry.***

when landing, the Army came up with gunship escorts known as Eagle flights. These helicopters remained above the LZ where they could maintain maneuverability and observation. If the enemy attempted to disrupt the insertion, they swooped in with suppressing fire.

Later, coordinated tactics between gunships and other helicopters led to the use of color-coded teams. For example, a Pink Team normally consisted of an OH-6A, which searched at low altitudes, while an AH-1G was up high and ready to pounce. As the enemy strengthened its air defense weaponry and tactics, armament in the helicopter gunship enabled airmobility to remain a fundamental instrument of U.S. strategy over the course of the war.

As the war dragged on, the enemy narrowed the technology gap. Not only did the enemy avoid conditions where U.S. forces could leverage technology, they also developed weapons and countertactics that challenged U.S. weaponry. From 16 October 1962 through 15 March 1963, only 11 utility tactical transport helicopters were hit by enemy fire. None were lost. Ten years later in Laos, during the 2-month Operation Lam Son 719, 107 helicopters were destroyed (primarily troop-carrying slicks) and 600 were damaged.[16]

Crossing into Laos was a severe test of helicopter technology. The Army had managed to moderate the flow of supplies into South Vietnam and keep the enemy off balance. As a result, helicopters in South Vietnam typically encountered only 7.62-mm and 12.7-mm guns. However, concentrated inside Laos were 23-mm, 37-mm, and 57-mm weapons arranged in mutually supporting positions. In fact, during the February-March 1972 campaign into Laos, the Army captured approximately 2,000 crew-served weapons.

U.S. technology made a "giant leap for mankind" in the 1960s. The race to the moon and the escalated war in Vietnam accelerated innovation and solidified U.S. cultural belief in and reliance on technology. Advances in combat helicopters during the period are a perfect example of how technology can render advantages in war. Reliable, heavily armed gunship platforms allowed field commanders to seize the tactical initiative and permitted Army airmobility to go forward, despite aggressive enemy efforts to disrupt helicopter-borne troop movement. Gunships created new avenues of tactical innovation in aerial reconnaissance-in-force, such as helicopter Pink

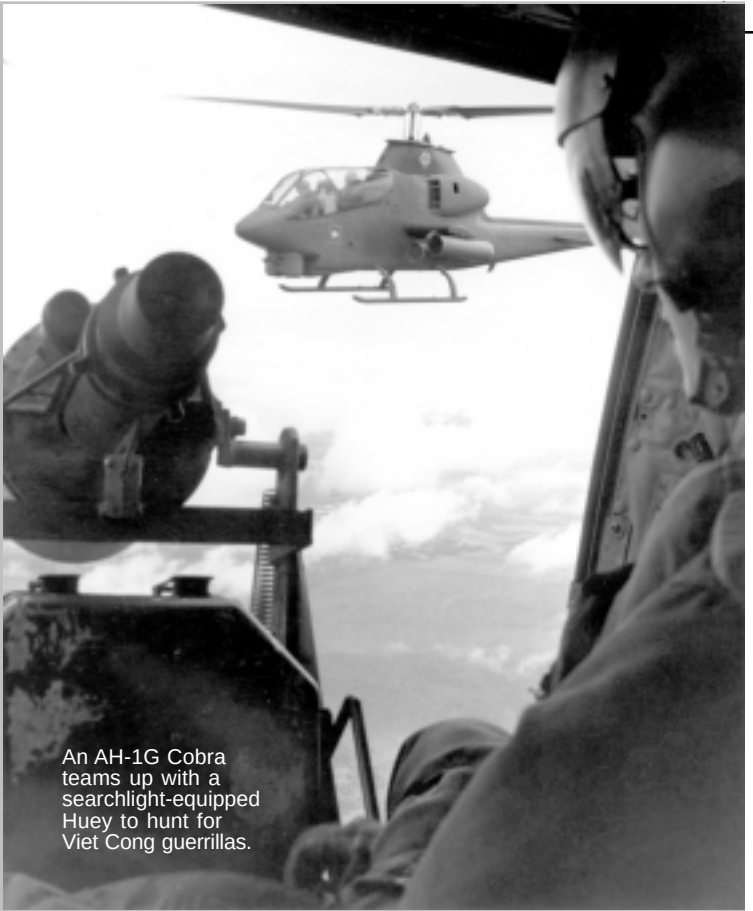
Teams. Gunships provided ground commanders with quick-reaction CAS as well as a safe means of weapon delivery when the enemy was in close combat with U.S. forces (known as "hugging") to find sanctuary from artillery or heavy air strikes.

The helicopter-gunship development stands as a warning to those who expect too much from technology. As the conflict began, the United States had a significant technological advantage and an immature doctrine, yet it converted the condition into a significant tactical advantage. Although the United States upgraded its helicopter gunships and refined doctrine as the war progressed, the leverage of technology was never as profound as it had been early in the war.

Colonel Trevor Dupuy said, "Save for the recent significant exception of strategic nuclear weapons, there have been no historical instances in which new and more lethal weapons have, of themselves, altered the conduct of war or the balance of power until they have been incorporated into a new tactical system exploiting their lethality and permitting their coordination with other weapons."[17] The bottom line is that, given time, an astute opponent will discover ways to minimize technological advantage.

As military strategist Carl von Clausewitz eloquently said, "If we desire to defeat the enemy, we must proportion our efforts to his powers of resistance. The product of two factors that cannot be separated, namely, the sum of available means and the strength of the will, expresses this. The sum of the available means may be estimated in a measure, as it depends (although not entirely) upon numbers; but the strength of volition is more difficult to determine, and can only be estimated to a certain extent by the strength of the motives. Granted we have obtained in this way an approximation to the strength of the power to be contended with, we can then take of our own means and either increase them so as to obtain a preponderance, or in case we have not the resources to effect this, then do our best by increasing our means as far as possible. But the adversary does the same; therefore, there is a new mutual enhancement, which in pure conception, must create a fresh effort towards an extreme."[18] ***MR***

US Army



An AH-1G Cobra teams up with a searchlight-equipped Huey to hunt for Viet Cong guerrillas.

***To reduce exposure to aerial observation, the NVA and VC resorted to night operations, which essentially neutralized a portion of the United States' technological edge. . . . The United States turned to improving night-fighting tactics by mounting night-vision devices and enormous spotlights in helicopters; however, it was the tactically proficient operators who enabled technology to re-command the fight.***

**NOTES**

1. Norman Polmar and Floyd B. Kennedy, *Military Helicopters of the World* (Annapolis, MD: Naval Institute Press, 1981), 8.
2. John J. Tolson, *Vietnam Studies: Airmobility 1961-71* (Washington, DC: Department of the Army, 1989), 39; on-line at <www.army.mil/cmh-pg/books/Vietnam/Airmobility/airmobility-fm.html>.
3. Polmar and Kennedy, 9.
4. Andrew Krepinevich, *The Army in Vietnam* (Baltimore, MD: Johns Hopkins University Press, 1986), 120.
5. Philip Chennery, *Vietnam, The Helicopter War* (Annapolis, MD: Naval Institute Press, 1991), 47.
6. Kevin Dougherty, "The Evolution of Air Assault," *Joint Forces Quarterly* (Summer 1999): 53.
7. Polmar and Kennedy, 262.
8. Ibid., 296.
9. Gary Telfer, Lane Rogers, and V. Keith Fleming, *U.S. Marines in Vietnam, 1967* (Washington, DC: History and Museum Division, HQ USMC, 1977), 206.
10. Tolson, 142.
11. Ibid., 133.
12. Ibid., 27.
13. Ibid.
14. Krepinevich, 169.
15. Harold Moore and Joseph Galloway, *We Were Soldiers Once. . . and Young* (New York: Random House, 1992), 230.
16. Chennery, 155-57.
17. Trevor Dupuy, *The Evolution of Weapons and Warfare* (New York: Harper and Row Publishers, 1986), 340.
18. Carl von Clausewitz, *On War*, ed., Anatol Rapoport (New York: Penguin Books, June 1981), 104.

*Commander David G. Tyler is a combat systems engineer, Naval Sea Systems Command, Dahlgren Division; and he is Executive Officer, Helicopter Combat Support Special Squadron 4, Norfolk, Virginia. He received a B.S. from Virginia Military Institute, an M.A. from American Military University, and he is a graduate of the Naval War College. He has served in various command and staff positions in the continental United States.*

# Renaissance of the Attack Helicopter in the Close Fight

*Americans define war as being waged against a uniformed, disciplined, opposing state's armed forces, the sort who will fight fairly, the way the Americans do.*

—Daniel P. Bolger[1]

THE FACT THAT I am writing this article at an Iraqi airfield north of Tikrit testifies to the success of the United States and its coalition partners in their endeavor to remove Saddam Hussein's Ba'athist regime and to liberate the Iraqi people. Although this second Persian Gulf war witnessed conventional and symmetrical battles in its opening phases, some Iraqi forces employed asymmetric techniques to undermine U.S. campaign plans and to test America's resolve.

Subsequent to the capture of Baghdad, Task Force (TF) Iron Horse, comprising the 4th Infantry Division (ID) and attached units, was charged with clearing the area north of Baghdad (centered on Tikrit, the former hub of Saddam's political support) of noncompliant forces (NCF) and interdicting the proliferation of the many remaining weapons systems in that area. Both the employment of asymmetric techniques against U.S. forces moving against Baghdad and the subsequent intransigence of NCF in northern Iraq, employing hit-and-run, guerrilla-style tactics to acquire weapons and disrupt U.S. lines of communications (LOC), were anathema to the U.S. definition of war.

During the first Persian Gulf war in 1991, Iraqi forces confronted the United States and its coalition partners according to the dominant Western (conventional and symmetric) paradigm of war. It is hardly surprising that the Iraqi forces were defeated. It is also not surprising that in 2003, some Iraqi forces adopted asymmetric approaches to try to mitigate U.S. overmatch in technology and conventional military prowess. The most glaring and disquieting Iraqi employment of asymmetric techniques occurred during the approach to Baghdad on 23 March 2003. Highly dispersed small Iraqi units set ambushes, using a cell phone and observer network in the cities south of Baghdad. These ambushes damaged a number of AH-64s that were conducting a corps-level, deep-shaping attack against Republican Guard divisions surrounding Baghdad.

The Iraqi enemy never presented a massed target for AH-64 attacks and quickly dispersed into the cities rather than remain in conventional and predictable defensive battle positions. During this Iraqi ambush, small-arms and antiaircraft fire damaged more than 90 percent of a U.S. regiment's helicopters, and one helicopter crew was captured. The damage to one attack helicopter battalion's aircraft was so severe that the battalion did not see any major action for the rest of the war.[2]

Not long after the fall of Baghdad, and before coalition forces had finished subduing a host of NCF in northern Iraq, the media began to report that the days

of the Apache Longbow were numbered. These negative media comments echoed the death knell of deep-attack shaping operations and postulated that the Apache was obsolescent. This opinion seemed to be based on one highly visible but unsuccessful large-scale deep attack. Actually, the Apache had proven its worth and effectiveness during the first Persian Gulf war and the war in Afghanistan.

Hoping to gain an advantage in the zero-sum defense appropriations game, self-proclaimed attack helicopter and air-power experts said it was time to eliminate the Apache and supplant its ground support role with the U.S. Air Force's A-10 Warthog. Others argued that the Apache was designed for a deep-attack role in the context of a conventional war between organized, combined-arms formations. Therefore, adversaries who embraced asymmetric approaches saw the Apache as a dinosaur, just another Cold War relic.

The armchair experts were wrong. After 23 March 2003, Army attack aviation adapted tactics to counter the asymmetric threat. With close air support (CAS) A-10 attacks, Apache helicopters conducted effective armed reconnaissance and close shaping missions that were integrated with ground maneuver to defeat Republican Guard divisions surrounding Baghdad. After Iraq's organized formations dissolved, Iraqi Ba'ath party guerrillas confronted effective and lethal small AH-64 armed weapons teams integrated with ground scouts and unmanned aerial vehicle (UAV) sensors. This phase of Operation Iraqi Freedom was characterized by decentralized, combined arms, small units operating in nonlinear, noncontiguous areas of operations (AOs). U.S. Army Field Manual 3-0, *Operations*, provides a perceptive description and codification of this operational milieu where combat and stability operations intersect.[3]

The Apache Longbow remains an effective instrument in armed reconnaissance operations throughout a nonlinear, noncontiguous battlespace against an enemy that uses symmetric and asymmetric tactics. After Baghdad was seized, the attack helicopter integrated with ground maneuver in a close fires role. Coalition forces were operating against paramilitary and noncompliant forces in nonlinear AOs that were highly distributed in time and space.

## Asymmetric Warfare, Quo Vadis?

*The enemy, employing his small forces against a vast country, can only occupy some big cities and main lines of communication and part of the plains. Thus, there are extensive areas in the territory under his occupation that he has had to leave ungarrisoned and that provide a vast arena for our guerrilla warfare.*—Mao Tse-tung[4]

***In 1991, Iraqi forces confronted the United States and its coalition partners according to the dominant Western (conventional and symmetric) paradigm of war. . . . It is not surprising that in 2003, some Iraqi forces adopted asymmetric approaches to try to mitigate U.S. overmatch in technology and conventional military prowess.***

Mao Tse-tung is one of the most widely studied practitioners of the asymmetric approach. In the quote above, he explains how guerrilla bands can harness time and space to their advantage. A host of definitions of asymmetric warfare and asymmetric strategy exists. In fact, there are so many definitions that asymmetry has become the strategic *term de jour* since the mid-1990s and now means many things to different people.

The *Joint Doctrine Encyclopedia* characterizes asymmetry as attacks "posing threats from a variety of directions with a broad range of weapons systems to stress the enemy's defenses."[5] However, Joint Publication 3-0, *Doctrine for Joint Operations*, describes asymmetric action as actions in which "forces, technologies, and weapons are different," or actions in which terrorism and a rejection of the conventional approach is the norm.[6] The 1999 *Joint Strategy Review* defines asymmetry even more broadly as "attempts to circumvent or undermine U.S. strengths while exploiting U.S. weaknesses using methods that differ significantly from the U.S. method of operations."[7]

U.S. Army War College professor Steven Metz offers another definition for strategic asymmetry: "In military affairs and national security, asymmetry is acting, organizing, and thinking differently from opponents to maximize relative strengths, exploit opponents' weaknesses or gain greater freedom of action. It can be political-strategic, military-strategic, operational, or a combination, and entail different methods, technologies, values, organizations, or time perspectives. It can be short-term, long-term, or by default. It can also be discrete or pursued in conjunction with symmetric approaches and have both psychological and physical dimensions."[8]

Counterinsurgency expert Max Manwaring limited the scope of asymmetric warfare to insurgencies and small internal wars. Manwaring explicitly refers to the U.S. experience of fighting guerrillas

A crew chief from the 392d Air Expeditionary Wing marshals in his A-10 Warthog to its parking spot 3 April 2003 at a forward deployed location in Iraq.

US Air Force

***Army attack aviation adapted tactics to counter the asymmetric threat. With close air support A-10 attacks, Apache helicopters conducted effective armed reconnaissance and close shaping missions that were integrated with ground maneuver to defeat Republican Guard divisions surrounding Baghdad.***

in Vietnam as an asymmetric war.[9] The first reference to his notion of asymmetric conflict is in an article on the U.S. experience in Vietnam.[10]

Asymmetric warfare is not a new concept; it dates as far back as the Roman occupation of Spain and the Levant. Asymmetry's scope and definition limit the use of hit-and-run, small-unit tactics by irregular and paramilitary elements to harass, ambush, bomb, and disrupt the outposts, checkpoints, or LOC of conventional formations. Practitioners of the asymmetric approach concentrate limited attacks against regular military forces' critical vulnerabilities by using treachery to undermine the overmatch of technology and aggregate forces of their adversaries.[11]

The subject of asymmetric warfare is relevant because the U.S. military will continue to confront enemies that use asymmetric techniques. Four facts point to this likelihood:

- Western powers have the most advanced militaries (technology and firepower) in the world.
- Economic and political homogenization among these nations essentially precludes a war among them.
- Most rational adversaries in the non-Western world have learned from the two wars against Iraq not to confront the West on its terms.
- The United States and its European allies will employ firepower and technology in the less-developed world against ostensibly inferior adversaries employing asymmetric approaches.

Asymmetric conflict will therefore be the norm, not the exception. The asymmetric nature of the war in Afghanistan underscores the salience of asymmetric conflicts.[12]

## Time and Space: The Dispersion/ Concentration Conundrum

*Strategy is the art of making use of time and space.*—Napoleon Bonaparte[13]

In the vast expanses of China, Mao Tse-tung masterfully manipulated time and space to cause Japanese forces to disperse. By inducing the dispersal of the Kwantung Army, Chinese guerrillas could attack isolated outposts and reduce Japanese forces piecemeal. Essentially, the weaker opponent can use time and space factors to shape the concentration/ dispersion chimera to his advantage. The asymmetric warrior uses space to draw his enemy out to the countryside, making it difficult for the big power to concentrate its numerical superiority. The conventional force, then, must use more and more troops

A 101st Airborne Division AH-64 Apache flies overhead during operations near Al Bajar, Iraq.

US Army

to secure its LOCs, resulting in the need for a host of isolated outposts. The weaker adversary is thereby able to locally concentrate his inferior numbers against overextended detachments.

Military historian B.H. Liddell-Hart refers to this form of warfare as an inversion of the orthodox principle of concentration: "Dispersion is an essential condition of survival and success on the guerrilla side, which must never present a target and thus can only operate in minute particles, though these may momentarily coagulate like globules of quick-silver to overwhelm some weakly guarded objective."[14] In other words, a prudent, asymmetric-thinking enemy manipulates time and space to disperse the greater power's military forces, protracting the conflict and wearing down the will of the orthodox opponent.

Mao Tse-tung and North Vietnamese General Vo Nguyen Giap repeatedly emphasized that forces dispersed to control territory become spread so thinly that they are vulnerable to attack. Thus, if the conventional formation concentrates its forces to overcome this vulnerability, then other areas are left insecure. A massive increase in forces could help resolve this operational contradiction, but it also immediately increases the domestic costs of the war. Conversely, if the conventional army aims to placate domestic opposition to the war by withdrawing some forces, the contradiction at the operational level becomes more acute.

Mao Tse-tung explained that the guerrilla could prolong his struggle and make it a protracted war by employing manpower in proper concentrations

***The Apache crews who conducted the deep-shaping attack on the night of 23 March 2003 must have thought they were staring into the abyss when they flew into curtains of small arms and antiaircraft artillery fire thrown up by Iraqi regular and irregular elements. . . . The Apaches flew into a classic asymmetric helicopter ambush similar to those guerrilla and paramilitary fighters created in Vietnam and Somalia.***

and dispersions and by concentrating against dispersed enemy detachments that are relatively weaker. For every territorial space, there is an inevitable mathematical logic that dictates how many troops are required to exert control. For example, British soldier and writer T.E. Lawrence claimed that it would have required 20 Turkish soldiers for every square mile (600,000 total—a prohibitive number) to control the Arab revolt in 1916.[15]

During Operation Iraqi Freedom, after the fall of Baghdad, TF Ironhorse's nonlinear AO north of Baghdad ran from Taji to Bayji along the Tigris River in the west, to Kirkuk in the north, and east to Iraq's border with Iran. On any given day, TF Ironhorse comprised about 24,400 combat and combat support troops operating in an AO of approximately 51,180 square (sq) kilometers (km). To put the potential for paramilitary dispersion and concentration into

***On 28 March, V Corps assigned the 101st Airborne Division (Air Assault) to conduct a deep attack against the 14th Brigade of the Medina Republican Guard Division. However, learning from the lessons of 23 March, the 101st's attack helicopters altered tactics, essentially conducting an in-depth zone reconnaissance, clearing the zone while attacking northward.***

Lawrence's mathematical logic, in this highly dispersed environment, coalition forces had approximately one soldier for every 2 sq km.

## Adaptation After the Abyss

*Whoever fights monsters should see to it that in the process he does not become a monster. And when you look long into the abyss, the abyss also looks into you.*—Friederich Nietzsche[16]

The Apache crews who conducted the deep-shaping attack on the night of 23 March 2003 must have thought they were staring into the abyss when they flew into curtains of small arms and antiaircraft artillery fire thrown up by Iraqi regular and irregular elements. After the regiment's attack against the Republican Guard Medina Division, the helicopters, with battered rotors and airframes full of holes, withdrew. The Apaches flew into a classic asymmetric helicopter ambush similar to those guerrilla and paramilitary fighters created in Vietnam and Somalia.

According to an Army report, the enemy was able to set ambushes using a cell phone and a visual observer network in the cities south of Baghdad. Supposedly, an Iraqi two-star general in Al Najaf alerted the Iraqi air defense network by phone about the Apache assembly area locations and when the helicopters had been launched. Army V Corps Commander Lieutenant General William S. Wallace remarked that the enemy general used a cell phone to speed-dial a number of Iraqi air defenders.[17]

The Iraqi pre-planned air defense network allowed paramilitary forces to respond quickly throughout the area with well-aimed, random fire. As a result, many Apaches took hits in the tail rotor and cockpit areas. U.S. aviators reported that they had encountered a hornet's nest of enemy antiaircraft fire delivered by small arms, rocket-propelled grenades, and antiaircraft iron-sight guns. As the aircraft approached their attack-by-fire positions, the entire power grid system below them went black, which was a signal for Iraqi air defenders to begin the antiaircraft ambush. The long wall of concentrated fire damaged 34 Apaches.

When describing this deep attack to the media, Wallace said that the attack helicopters "did not meet the objectives that I had set for the attack."[18] However, this was only one mission during the war, and the Army and the attack helicopter community adapted techniques to defeat an enemy more resolute and treacherous than originally estimated.[19] Wallace said, "[W]e learned from our mistakes. We adjusted and adapted based on what we learned, and we still used the Apache helicopter in a significant role during the course of the fight."[20]

After 23 March, the Army V Corps continued the offensive with a series of limited objective attacks. On 28 March, V Corps assigned the 101st Airborne Division (Air Assault) to conduct a deep attack against the 14th Brigade of the Medina Republican Guard Division. However, learning from the lessons of 23 March, the 101st's attack helicopters altered tactics, essentially conducting an in-depth zone reconnaissance, clearing the zone while attacking northward. When they encountered organized small-arms fire similar to the type used during the night of 23 March, they pulled back and directed Air Force CAS to eliminate enemy resistance.

For the remainder of the war, Apache helicopters adopted a close shaping role instead of conducting deep attacks and provided aviation close fires in support of ground maneuver forces. Commenting on the shift from the deep-attack role to the close combat attack, close support role, the V Corps commander stated, "When the 3d Infantry Division attacked through the Karbala Gap and subsequently into Baghdad, in addition to its own attack helicopter battalion, it had 21 Apaches from the 11th Attack Helicopter Regiment under its operational control (OPCON), amounting to a total of 39 Apaches for continuous 24-hour operations to provide close combat attack or close support of ground forces."[21]

The 101st's helicopter attacks after 23 March destroyed 866 targets, including tanks, infantry fighting vehicles, artillery, air defense artillery (ADA), and missile launchers. In addition, the 3d ID's attack helicopter battalion destroyed 25 tanks, 27 infantry fighting vehicles, 6 artillery pieces, and 52 ADA pieces as it provided aviation close fires during the march to Baghdad.

To adapt to an enemy employing asymmetric tactics from urban-centric dispositions, the 3d ID's attack battalion mission profile transformed from battalion-massed or phased attacks against armor and artillery to continuous close combat attacks in support of the division's main effort brigade combat team (BCT). The Apache's close support role dur-

An Apache AH-64 lands to re-arm during combat operations near Baghdad.

US Army

ing the war's principally orthodox, formation-against-formation phase signaled the rebirth of aviation in a close fires role and represented a paradigm shift from a decade-long infatuation with deep attacks. After U.S. forces seized Baghdad, the Apache continued to perform in a close support role, but in an expanded battlespace and against a more dispersed and unorthodox paramilitary foe employing Maoist hit-and-run techniques.[22]

***To adapt to an enemy employing asymmetric tactics from urban-centric dispositions, the 3d ID's attack battalion mission profile transformed from battalion-massed or phased attacks against armor and artillery to continuous close combat attacks in support of the division's main effort brigade combat team.***

## The Close Fire Role Against Irregulars

*We must make war everywhere and cause dispersal of [enemy] forces and dissipation of his strength.*—Mao Tse-tung[23]

After the fall of Baghdad, TF Ironhorse cleared and expanded the large, nonlinear AO in northern Iraq. Instead of fighting Republican Guard divisions, the task force cleared the AO of elusive, intransigent NCFs. In this milieu, attack helicopters, working in teams of two, performed cordon and search, armed aerial reconnaissance, airborne reaction force, and patrol operations. These roles were similar to the successful, responsive attack helicopter tactics employed during the Vietnam war.

While TF Ironhorse's aviation brigade's civil affairs element was trying to restore water and electricity to local villages, its attack helicopter crews, operating with the 1st BCT, were attacking the various elements opposing the new order: hard-core members of Saddam Hussein's government, criminal bands, Iranian agents, suicide bombers, and power-hungry Iraqi factions determined to seize control. This period represented an overlap between war and stability operations.

Stability operations, the current Army lexicon for what used to be operations other than war and low-intensity conflict, encompass a wide range of tasks, including countering insurgencies. Intensity is relative and contextual; however, when the term "low-intensity conflict" was in vogue, an aphorism offered, "It is not low intensity to the platoon engaged in a firefight with insurgents."

In today's vernacular, Somalia would be categorized within the realm of stability operations. However, anyone who has read the book or seen the movie *Black Hawk Down* realizes the acute intensity of the Battle of Mogadishu on 3-4 October 1993.[24] V Corps chief of staff Brigadier General Daniel Hahn described this environment when he said, "It will look at times like we are still at war," and "stability operations are characterized by momentary flare-ups of violence."[25]

***To preempt and unhinge any NCF effort to attack the aviation brigade's base camp, AH-64s, integrated into combined-action teams comprising military police, tactical human intelligence teams, and Bradley ADA Linebackers, conducted raids, ruses, and feints in the 5-km area beyond the wire. . . . As a result, the enemy conducted no successful attacks against the Camp Speicher base cluster.***

At the beginning of the war with Iraq, the United States and coalition forces aimed to destroy Republican Guard divisions so as to remove Saddam Hussein's regime. After the regime's collapse, the new mission statement required TF Ironhorse to clear the AO of NCF; to interdict the acquisition and proliferation of weapons; and to establish a secure, stable environment in northern Iraq. In this landscape, the Apache proved to be an effective weapons platform for reconnaissance, detection, and interdiction of NCF.

During the evening of 1 May 2003, scouts and a UAV working under the 1st BCT observed and engaged paramilitary elements stealing crates of ammunition from an arms cache west of Tikrit. An aerial weapons team of Apaches arrived at the objective shortly thereafter, vectored to the target by 1st BCT command post staff officers who were watching live UAV-feed. The Apaches sealed off the NCF's avenue of escape, opened fire with 30-millimeter cannon, and turned the paramilitary's vehicle into a "hunk of twisted metal," leaving 14 dead.[26]

Attack helicopters were effective in blocking and interdicting fleeing paramilitaries during cordon and search operations, working within the ground BCT's concept of operation. On several occasions, aerial weapons teams proved instrumental in filling holes in the cordon along inaccessible exfiltration routes. To preempt and unhinge any NCF effort to attack the aviation brigade's base camp, AH-64s, integrated into combined-action teams comprising military police, tactical human intelligence teams, and Bradley ADA Linebackers, conducted raids, ruses, and feints in the 5-km area beyond the wire. In some instances, Apaches destroyed unmanned remnant air defense systems just outside the main operating base fence line to exhibit dissuasive and credible force. As a result, the enemy conducted no successful attacks against the Camp Speicher base cluster. A final but salient component of the rebirth of aviation close fires was a continuous relationship between attack helicopter companies and the ground BCT.

For the duration of the counter-NCF phase of Operation Iraqi Freedom, one attack helicopter company remained under each ground brigade's OPCON. An aviation liaison officer (LNO) also remained in the command post of each brigade to plan and integrate close support. One LNO was a seasoned senior warrant officer, two were career course captains, and all were Apache-qualified aviators.

The LNOs were key players in anticipating missions and in integrating air and ground operations. Also, allocating one platoon per 12-hour mission cycle allowed the attack battalion to respond to contingencies 24 hours a day, 7 days a week in the three AOs. The relationship, training, and techniques that developed between the aviation brigade and the ground combat teams were essential preconditions for success and bore exponential improvements in air and ground integration. The only disadvantage of having three attack companies under an OPCON relationship with the brigades was that this left no Apaches for a tactical combat force (TCF) or reaction-force role. A potential remedy for this was to either embed a TCF team in each company or to rely on the corps attack regiment for the TCF. In such an expansive AO, maintaining one central and principal operating base was necessary for sustaining a high tempo.[27]

## The Importance of Concentration

*Every lost battle is a principle of weakness and disorganization; and the first and immediate desideratum is to concentrate, and in concentration, to recover order, courage, and confidence.*—Carl von Clausewitz[28]

*And if I concentrate while he divides, I can use my strength to attack a fraction of his. There, I will be numerically superior. Then if I am able to use many to strike few at a selected point, those I deal with will be in dire straits.*—Sun Tzu[29]

These quotes by two of the most renowned philosophers of war show the importance of concentration. The words of Clausewitz and Sun Tzu also contrast the distinctly Western and Eastern ways of war. Modern military history shows that the West and its military forces have generally dominated and monopolized the conventional paradigm of war, usually winning when the East or the South decided to fight according to this paradigm. The philosophies of military strategists Henri de Jomini, Clausewitz, and Russian general Alexandr A. Svechin are embedded in the cultures of these militaries. As a re-

sult, the West has embraced the direct use of military force, combining maneuver and firepower to mass combat power at a decisive point, which usually equates to the destruction or annihilation of an enemy force or army.

The problem is that the enemy U.S. forces are most likely to fight is one who has for centuries embraced a different philosophy of war. Potential adversaries are from Asia and the Near East—cultures that generally embrace an Eastern tradition of war. Moreover, the Eastern way of war, which usually stems from the philosophies of Sun Tzu and Mao Tse-tung, is distinguished from the Western way of war by its reliance on indirectness, attrition, and perfidy. In other words, the Eastern way of war is inherently more asymmetric.

Employing attack helicopters in a close combat role where intransigent adversaries adopt asymmetric techniques is particularly germane for the U.S. military in its war against al-Qaeda. Since the 19th century, the United States has embraced the conventional paradigm and marginalized the unconventional one. After victories against Iraq in two conventional Persian Gulf wars, it is unlikely that another second-tier power will fight the United States according to its paradigm.

The implication for using attack helicopters in the future is evident; the U.S. military needs to cultivate the mindset, doctrine, and techniques that combine attack helicopters with small, ground-maneuver elements operating in a dispersed AO. Attack helicopters also should be able to concentrate small teams rapidly at the critical time and place to provide lethal fires.

***The Eastern way of war, which usually stems from the philosophies of Sun Tzu and Mao Tse-tung, is distinguished from the Western way of war by its reliance on indirectness, attrition, and perfidy. In other words, the Eastern way of war is inherently more asymmetric. . . . The Army has historically viewed irregular warfare as a temporary anomaly. As a result, it has not done a stellar job of retaining asymmetric warfare techniques in its institutional memory.***

Learning these lessons and techniques is important because asymmetric warfare is not ephemeral. The Army has historically viewed irregular warfare as a temporary anomaly. As a result, it has not done a stellar job of retaining asymmetric warfare techniques in its institutional memory. One expert on the history of the Army and guerrilla warfare feels guerrilla warfare is so incongruous to the natural methods and habits of a well-to-do society that the Army has tended to regard it as abnormal and to forget about it when possible. Each new experience with irregular warfare has required that the Army learn appropriate techniques all over again.[30] ***MR***

**NOTES**

1. Daniel P. Bolger, *Savage Peace: Americans at War in the 1990s* (Novato, CA: Presidio Press, 1995), 69.
2. U.S. Army, V Corps, "Attack Aviation Lessons Learned: Operation Iraqi Freedom," unpublished and unclassified report, 2003, Camp Virginia, Kuwait, 1.
3. U.S. Army Field Manual (FM) 3-0, *Operations* (Washington, DC: U.S. Government Printing Office [GPO], 2001).
4. Mao Tse-tung, *On Protracted Warfare* (Peking: Foreign Language Press, 1967), 65.
5. Joint Publication (JP), *Joint Doctrine Encyclopedia* (Washington, DC: GPO, 1997), 59.
6. JP 3-0, *Doctrine for Joint Operations* (Washington, DC: GPO, 2001), III-9.
7. *Joint Strategy Review* (Washington, DC: GPO, 1999), 2
8. Steven Metz, "Strategic Asymmetry," *Military Review* (July-August 2001): 24.
9. Max G. Manwaring, *Internal War: Rethinking Problem and Response* (Carlisle, PA: Strategic Studies Institute, 2001), vii-viii.
10. The term "asymmetric conflict" first appears in 1974 in Andrew Mack, *The Concept of Power and its Uses in Explaining Asymmetric Conflict* (London: Richardson Institute for Conflict and Peace Research, 1974).
11. Metz, 25.
12. Once again, "inferior" connotes a weakness in conventional measures of military might, not necessarily in strategy, tactics, and warrior skills. Asymmetric conflict was also the norm during the Cold War and for most of U.S. history. During the Cold War, the threat of nuclear escalation precluded a symmetric conflict between the two superpowers.
13. Napoleon Bonaparte, in Michael Handel, *Masters of War: Sun Tzu, Clausewitz, and Jomini* (Portland, OR: Frank Cass, 1992), 99.
14. B.H. Liddell-Hart, *Strategy,* 2d ed. (New York: Praeger, 1967), 365.
15. Andrew Mack, "Why Big Powers Lose Small Wars: the Politics of Asymmetric Conflict," in *Power, Strategy, and Security: a World Politics Reader*, ed., Klaus Knorr (Princeton, NJ: Princeton University Press, 1983), 138-39; Mao Tse-tung, *On Guerrilla Warfare*, trans., Samual B. Griffith II (Champaign: University of Illinois Press, 2000), 98; Liddell-Hart, 366.
16. Friedrich Wilhelm Nietzsche, *Beyond Good and Evil,* book IV, trans., Helen Zimmern (1886) in *Bartlett's Familiar Quotations* (New Jersey: Franklin Electronic Bookman, 1998), 146.
17. Scott Canon, "Time to Study the Lessons Learned in War," *Kansas City Star,* 2 May 2003, 1; V Corps, 1; Neil Baumgardner, "V Corps Commander: Army 'Altered Use' of Apaches Following Failed Attacks," *Defense Daily,* 8 May 2003, 3.
18. V Corps, 2.
19. Baumgardner, 3; Rowan Scarborough, "General Tells How Cell Phone Foiled U.S. Attack in Iraq," *The Washington Times,* 8 May 2003, 13.
20. Scarborough, 13.
21. V Corps, 2; Baumgardner, 3.
22. Baumgardner, 3; Baumgardner, "Apache Longbow Battalion Destroyed Two Republican Guard Battalions During OIF," *Defense Daily*, 4; V Corps, 2.
23. Mao Tse-tung, 68.
24. Michael R. Gordon, "Between War and Peace," *New York Times,* 2 May 2003, 1.
25. Ibid.
26. Ibid.
27. Major John Novalis, 4th ID attack helicopter battalion Executive Officer, interview by author, 13 May 2003 Camp Speicher, Iraq; "Operation Iraqi Freedom After Action Review," unpublished and unclassified report, 2003 Camp Speicher, Iraq, 5.
28. Carl von Clausewitz, *On War*, ed., Anatol Rapoport (New York: Penguin Books, 1968), 361.
29. Sun Tzu, *The Art of War*, trans., Samual B. Griffith (New York: Oxford University Press, 1982), 98.
30. Russell F. Weigley, *The History of the United States Army* (New York: MacMillan Publishing Company, 1967), 161.

*Major Robert M. Cassidy, U.S. Army, is a member of the U.S. Army, Europe, Commanding General's Initiatives Group, Heidelberg, Germany. He received a B.A. from Fitchburg State College, an M.A. from Boston University, and an M.A.L.D. and a Ph.D. from the Fletcher School of Law and Diplomacy. He has served in various command and staff positions, including S3, 4th Aviation Brigade, 4th Infantry Division (Mechanized), Operation Iraqi Freedom; and as squadron executive officer, 1-10 Cavalry, 4th Infantry Division.*

# Precision Firepower: *SMART* BOMBS, *DUMB* STRATEGY

*You may fly over a land forever; you may bomb it, atomize it, pulverize it and wipe it clean of life—but if you desire to defend it, to protect it, and keep it for civilization, you must do this on the ground, the way the Roman legions did, by putting your young men into the mud.*

—T.R. Fehrenbach[1]

EVER SINCE DAVID slew Goliath with a stone from his slingshot, every combatant's desire has been to defeat his enemy from afar. Since the Industrial Revolution the question has been asked, "Why send a soldier when a bullet will do?" The natural desire is to limit the need to go face-to-face with one's enemy and hence to avoid the enemy's counterblows. In 1999, historian John Keegan said, "Now there is a new turning point to fix on the calendar: June 3, 1999, when the capitulation of President Milosevic proved that a war can be won by airpower alone."[2] First muskets, then artillery, and now bombs and missiles have almost eliminated the Homeric clash of heroes.

In the 21st-century Information Age, the preference for firepower delivered by air and supported from space has reached new heights. Weapons are now so accurate that we describe them as precision-guided munitions (PGMs), "smart," or even "brilliant" bombs. Unguided projectiles are merely "dumb" bombs. The United States, using intelligence and precision weapons, can destroy almost anything, anywhere, any time. Theorists have advanced a number of schools of thought concerning what this capability means to military strategy. Although these concepts differ on particular issues, they stem from a common belief that precision weapons offer a new way of accomplishing military strategy.

In his history of air operations in the Persian Gulf war, U.S. Air Force (USAF) historian Richard P. Hallion triumphantly concludes, "Simply stated, airpower won the Gulf war. In the airpower era, neither armies nor navies can be considered the primary instrument of securing victory in war."[3] Clearly, some theorists see that, more often than not, land or naval forces should support aerospace power as the preeminent military arm. This is a dramatic reversal of traditional roles.[4]

John A. Warden, an early advocate of precision firepower, sees enemy systems as five interconnecting rings that precisely targeted air strikes could destroy.[5] Air strikes could "reduce capability . . . , degrade effectiveness, [and like a living organism, make enemy systems] susceptible to the infectious ideas we want to become part of it."[6] Warden says that the advent of PGMs makes it possible to separate an enemy's military strength from his willpower, destroying the former and rendering the latter irrelevant.

***USAF doctrine defines precision engagement as "the ability . . . to cause discriminate strategic, operational, or tactical effects." Precision engagement also "creates the opportunity for a different approach to harnessing military power to policy objectives."***

The U.S. Air Force coined the phrase "global reach, global power" to describe its ability to deliver firepower with great precision anywhere in the world on short notice. USAF doctrine defines precision engagement as "the ability . . . to cause discriminate strategic, operational, or tactical effects."[7] Precision engagement also "creates the opportunity for a different approach to harnessing military power to policy objectives."[8] Precision weapons enable the concept of "strategic attack," a term that describes "operations intended to directly achieve strategic effects . . . and to achieve their objectives without first

having to necessarily engage the adversary's fielded military forces in extended operations at the operational and tactical levels of war."[9] Recent strategists use the term "effects-based operations" (EBO).

EBO advocates believe technological advances make it possible "for air attacks to create physical and psychological effects that combine to quickly prevent a fielded land force from functioning well enough to achieve its desired objectives."[10] In the apparent race to embrace the Information Age, strategists at the U.S. Joint Forces Command are using the term "rapid decisive operations" (RDO) to describe a new concept of war. RDO combines effects-based operations "with superior knowledge and command and control capabilities" to render an enemy incoherent, thereby forcing him to "cease actions that are against U.S. interests or have his capabilities defeated."[11]

B.H. Liddell-Hart's definition of military strategy is, "The art of distributing and applying military means to fulfill the ends of policy."[12] I use the term "precision firepower" to describe the theory that firepower, usually delivered from the air with great accuracy against a discrete set of targets, can lead directly to the defeat of the enemy and to the attainment of U.S. policy objectives.[13]

The thread of continuity between the various strains of thought is that precision firepower will revolutionize military strategy, not just tactics and operations. The belief is that armies will be able to quickly achieve policy objectives, and wars will be won that will have low casualties and collateral damage and will use few, if any, ground forces. Precision firepower is sometimes said to blur the distinctions between the tactical, operational, and strategic levels of war. This blurring encourages thinkers to equate the ability to destroy something with the purpose behind destroying it—to equate the means and ways of strategy with its ends. This is indeed a breathtaking theory, and it offers a revolutionary route to victory in war. If only it were so.

## The Theory in Practice

Military theorists have historically overestimated firepower's effectiveness. Precision firepower might be tactically and operationally decisive when the military aim is negative, in the sense of punishing an enemy for taking certain action or in denying him certain military options, but no matter how precisely firepower is delivered, it cannot be strategically decisive, for short of a Carthaginian peace or an Armageddon, the policy ends of war require something more than annihilation. Without a fundamental, long-term change in the enemy's behavior, the victor is forced to continually parry the enemy's operations so long as the enemy sees fit to test the victor's means and resolve. Precision firepower might make the job of ground forces immensely easier and less costly, but in the end the victor must confront the vanquished face-to-face to lay claim to the victory.

***Precision firepower is sometimes said to blur the distinctions between the tactical, operational, and strategic levels of war. This blurring encourages thinkers to equate the ability to destroy something with the purpose behind destroying it—to equate the means and ways of strategy with its ends. This is indeed a breathtaking theory.***

A number of technical, tactical, and political factors have bedeviled the real-world application of precision firepower since its birth. The following paragraphs briefly review the factors' limitations.

**Technical limitations.** As with any weapon system, there are technical limits to precision firepower's effectiveness. Bad weather can obscure the target area and distort the laser beams that guide weapons to their targets. Guidance systems can fail and send bombs off target, perhaps into civilian areas. Coordinating the reconnaissance, intelligence-collection, and targeting processes is extremely complex and not foolproof. Jungle, mountain, and urban terrain makes targeting fiendishly difficult, even with ground spotters. Also, simple mechanical reliability is never perfect.[14] The PGMs' accuracy has improved by orders of magnitude since their introduction late in the Vietnam war; nevertheless, precision weapons' real-world accuracy is never quite up to the advertised level.

**Monetary limitations.** Even with a much-increased budget for defense, the prosaic issues of cost, production, and logistics can combine to limit the availability of precision strike weapons. PGMs are expensive, time-consuming to produce, and are expended rapidly. In one admittedly extreme case in Afghanistan, an F16 fighter-bomber and a B2 stealth bomber used several 500-pound bombs, several cluster munitions, and sixteen 2,000-pound bombs to attack one Toyota pickup truck containing 15 suspected Taliban fighters.[15]

**Political considerations.** Political considerations have often limited the effectiveness of airpower at the strategic level of war. From reluctance to indiscriminately bomb civilian targets in World War II,

Viet Cong and North Vietnamese officers at at prisoner exchange near Loc Ninh, Vietnam, 12 February 1973.

US Army

***[One] point, which we often forget is that the enemy has a vote in determining the effectiveness of precision firepower theory. . . . The enemy can usually find the means to avoid, absorb, wait out, or defeat the attack of firepower. In a survey of post-World War II conflicts, military historian Robert H. Scales, Jr., concludes, "To be sure, firepower can be paralytic in its effect. But paralytic effects by fire are always fleeting."***

to the fear of nuclear war with China and Russia in Korea, to détente-imposed restrictions on North Vietnamese targets, to the reluctance of some NATO nations to sanction the bombing of dual-use targets in Serbia, the U.S. has often felt the need to limit the application of its immense technological superiority when using firepower at the strategic level of war. The particular reasons are different, as are the wars, but an irrefutable pattern emerges from the historical record.[16] The usual response of firepower advocates has been that in the next war, using better technology unshackled from political limitations, firepower will deliver on its strategic promise. But the political object of the war will always limit the utility of firepower, no matter how precisely applied.

**Enemy considerations.** Another point, which we often forget is that the enemy has a vote in determining the effectiveness of precision firepower theory. As Prussian military theorist Carl von Clausewitz reminds us, "War is a contest against an animate force that resists our efforts at every turn."[17] The enemy can usually find the means to avoid, absorb, wait out, or defeat the attack of firepower. In a survey of post-World War II conflicts, military historian Robert H. Scales, Jr., concludes, "To be sure, firepower can be paralytic in its effect. But paralytic effects by fire are always fleeting. Armies have shown time and again that they can become inured to the paralytic effects of firepower and can even learn creative ways to lessen its destructive effects."[18]

Current experience in Afghanistan suggests that the effects of precision firepower are limited even against a primitive foe. U.S. air strikes did not become effective until late November 2001 when they were directed by U.S. Special Forces troops in direct support of Northern Alliance ground forces assaulting Taliban positions.[19] And, as the battles of Tora Bora and the Shah-i-khot Valley indicate, reliance on Afghan surrogates for ground forces comes with its own set of limitations and disappointing results, as intended targets were often allowed to escape. In his recently published study, Stephen Biddle convincingly relates how quickly and effectively Taliban and al-Qaeda forces were able to outsmart, avoid, and adapt to U.S. precision firepower.[20]

Precision firepower also assumes a number of things are knowable about the enemy when often they are not. EBO advocates offer policymakers a menu of desired effects to impose on an enemy. EBO advocates incorrectly assume the United States can accurately determine what assets an enemy values most and attack them. In this sense, precision firepower is a tool for believers in gradualism, escalation, and punishment game theory. Precision firepower advocates can fall prey to the fallacy of mirror-imaging—the belief that the enemy will respond to our actions in ways we ourselves would respond. Of course, the destructive physical effects airpower delivers might or might not affect the enemy the way we anticipate. Even if we could reduce the enemy to a system of systems and target the enemy with great precision, all but the most primitive, incompetent enemies will react and adapt.[21] Precision firepower alone cannot destroy the resilience of enemy willpower or the persistence of his strategic intentions.

**Reduction of military advantage.** The United States does not enjoy a permanent monopoly on the technology of precision firepower. The inexorable cycle of weapons and counterweapons development

US Air Force

An F-15E Strike Eagle taxis on the runway at Aviano Air Base as an F-16 Fighting Falcon lifts off on a mission over Kosovo, 12 May 1999.

***Some believe that air support for the Kosovo Liberation Army's ground operations plus the threat of a ground invasion finally convinced Milosevic to agree to an armistice. . . . Whatever the reason, 25,000 plus NATO ground troops were needed to enforce the terms of the armistice. NATO troops are still in Serbia, and no political solution that would allow NATO's withdrawal is in sight.***

will sooner or later reduce our tremendous military advantages. To date, the theory of precision firepower has been tested only against relatively unsophisticated enemies. Were the United States to engage an enemy with the resources and military might of the old Soviet Union or tomorrow's China or Iran, we would likely find precision firepower wanting. Many of our enemies and some of our friends will sell sophisticated weapons to any rogue nation with money.

An enemy with limited but well-allocated, high-tech weapons of his own could stymie key parts of our offensive arsenal, which is precisely what Serbia was able to do in 1999. To deny NATO aircraft the signal needed to locate and destroy them, Serb air defense operators turned their radar off, which caused NATO planners to think twice and fly high before directly attacking Serbian ground forces. Serbian airpower's mere existence, not its use, kept NATO jets above 15,000 feet, which greatly degraded their effectiveness against Serb forces. NATO was forced to resort to bombing fixed, dual-use military and civilian targets to bring pressure on Serbian President Slobodan Milosevic's government.[22] An enemy's ability to wait out, counter, or evade the effects of precision firepower neatly exposes the theory's shortcomings.

**Moral implications.** Precision firepower theory raises unique, thorny moral dilemmas. What were the moral implications of attacking Serbian dual-use infrastructure to avoid ground combat against Serbian paramilitaries committing atrocities in Kosovo? How much direct and indirect harm can the U.S. impose on civilians near such targets to limit the risk to U.S. pilots? The international outcry against the bombing campaign, some from within NATO itself, certainly encouraged Milosevic to hold out in hopes of a collapse of NATO will or unity.[23] The International Criminal Tribunal for the former Yugoslavia briefly contemplated indicting NATO military leaders for violating the law of war.[24] That persuasion is a game both sides can play and is a factor precision firepower advocates often ignore.

The United States' preference for bombing instead

***If the objective is merely to destroy some particular capability of another state, then precision firepower alone might be successful. We must not, however, expect that our relatively cheap, quick, and easy military victories will somehow bring about long-lasting peace, stability, and support for U.S. strategic objectives.***

of conducting ground operations has caused many leaders in the developing world to view the United States as a powerful but cowardly bully. The United States appears willing to lob missiles and bombs at an enemy from afar but unwilling to confront its foes "honorably."[25] Our impressive technology does not seem to intimidate our enemies into submission, but to encourage them to find new ways to resist our strengths and to attack our weaknesses asymmetrically.

## Precision Firepower Theory's Seductive Nature

The use of precision firepower also seduces U.S. foreign policymakers to resort quickly to the use of force as a substitute for grand strategy. Unlike the complicated, costly synchronization of all of the elements of power over time to achieve foreign policy objectives, precision firepower seems to promise a rapid, risk-free path to victory that uses limited military force. USAF Colonel Phillip S. Meilinger argues, "Aerospace power . . . should be our weapon of choice because it is the most discriminate, prudent, and risk-free weapon in our arsenal."[26]

As with every seduction, however, the excitement of the chase soon is replaced by discontent and even misery. The ability to destroy fixed targets in the enemy's homeland is not a substitute for strategy. As U.S. joint doctrine warns, "There is a delicate balance between the desire for quick victory and termination on truly favorable terms."[27] Precision firepower tends to tip that balance toward quick victory.

Precision firepower theory also encourages U.S. strategists to overreach in achieving strategic objectives. In the late 20th century, the United States often demanded concessions from wounded but not defeated enemies—concessions that were far out of proportion to the military situation on the ground. Regime punishment all too easily becomes regime change in the overheated rhetoric that characterizes U.S. foreign policymaking. Conversely, situations in Panama and Grenada were quickly resolved using a combination of precision firepower *in support* of landpower. It is instructive to remember what surrender and military occupation can achieve.

In the 1999 bombing of Serbia, NATO leaders and U.S. President William Clinton were convinced that only a few days of air strikes against fixed Serbian targets would persuade Milosevic to end the ethnic cleansing in Kosovo. After 78 days of bombing, immense destruction of Serbian infrastructure, and months of intensified ethnic cleansing, NATO and Clinton were forced to consider a ground invasion to resolve the conflict. Some believe that air support for the Kosovo Liberation Army's ground operations plus the threat of a ground invasion finally convinced Milosevic to agree to an armistice. Other studies conclude that Milosevic agreed to an armistice only when he concluded that NATO was about to annihilate Serbia's economic and civilian infrastructure.[28] Whatever the reason, 25,000 plus NATO ground troops were needed to enforce the terms of the armistice. NATO troops are still in Serbia, and no political solution that would allow NATO's withdrawal is in sight. The alleged success of the bombing campaign locked NATO into a strategic conundrum.

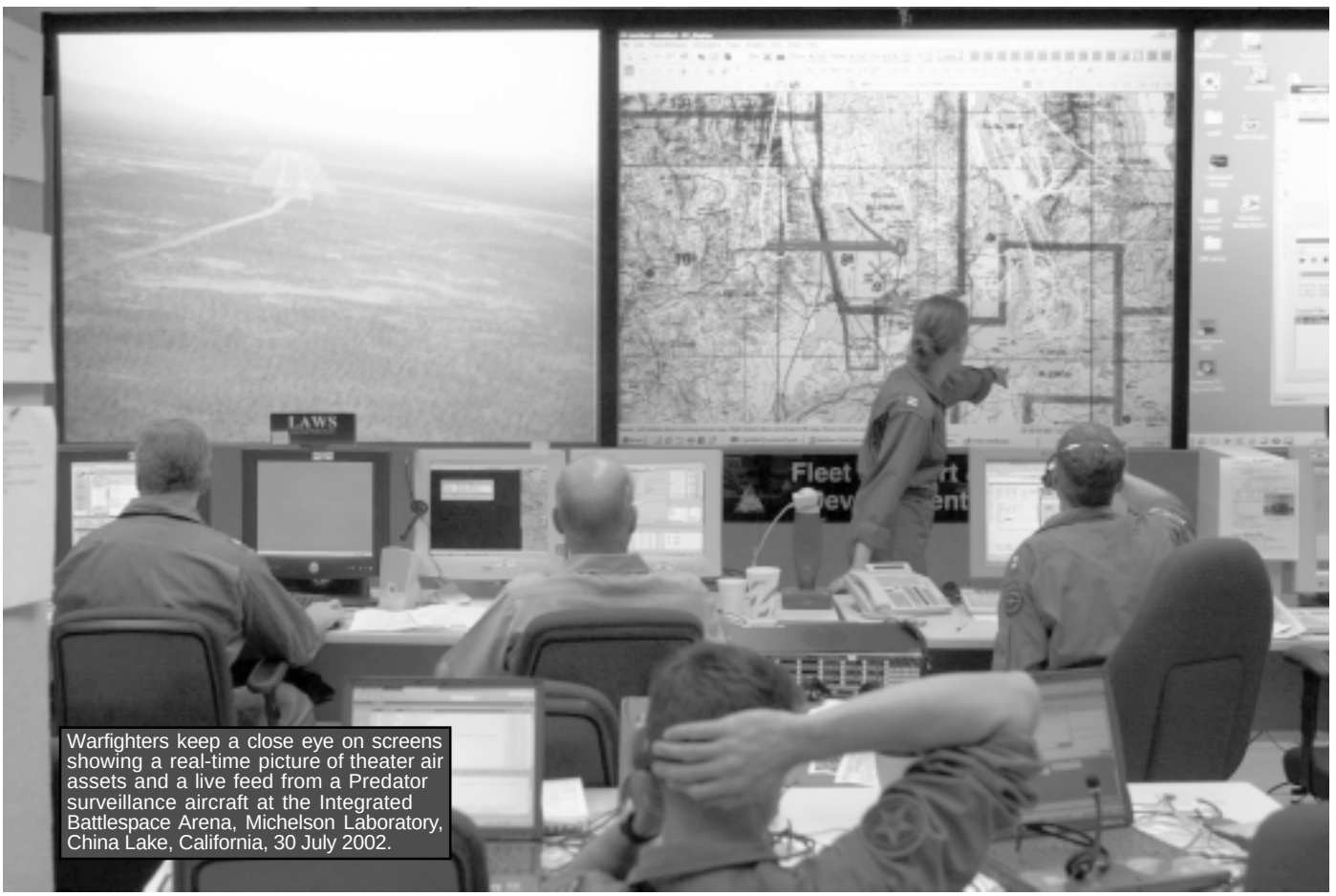
The United States should ensure that its strategic objectives are commensurate with the military victories U.S. Armed Forces have won. If the objective is merely to destroy some particular capability of another state, then precision firepower alone might be successful. We must not, however, expect that our relatively cheap, quick, and easy military victories will somehow bring about long-lasting peace, stability, and support for U.S. strategic objectives. Such grandiose expectation will only make disappointment that much more intense.

## The Problem of Ends in War

Assume that we can sweep aside all the limitations on precision firepower's effectiveness. Assume that the United States' weapons cupboards are overflowing, that the terrain and weather favor us, that the enemy is militarily incompetent, and that we have addressed moral considerations to everyone's satisfaction. Smart bombs and Information-Age wonder weapons prove decisive at the tactical and operational levels of war. The fact is that even in such an idyllic world, precision firepower will come up short because even when the weapons work, the theory cannot deliver victory.

Precision firepower theory's critical shortcoming is that it cannot achieve strategic objectives on its own. Precision air strikes might persuade an enemy to sue for an armistice, but it cannot compel him to

US Air Force




Warfighters keep a close eye on screens showing a real-time picture of theater air assets and a live feed from a Predator surveillance aircraft at the Integrated Battlespace Arena, Michelson Laboratory, China Lake, California, 30 July 2002.

***In the apparent race to embrace the Information Age, strategists at the U.S. Joint Forces Command are using the term "rapid decisive operations" (RDO) to describe a new concept of war. RDO combines effects-based operations "with superior knowledge and command and control capabilities" to render an enemy incoherent, thereby forcing him to "cease actions that are against U.S. interests or have his capabilities defeated."***

alter his behavior once strikes cease. When attacked only by firepower, the enemy determines whether or not to submit and how faithfully he will adhere to proffered terms. A political resolution to war that requires an enemy to make fundamental changes to his foreign or domestic policies is possible only through the decisive application of firepower *and* landpower. Only when the victor brings his ground forces to bear to make even passive resistance impossible can he impose his will on the enemy. Even when precision firepower is decisively important in the conduct of a campaign, only ground forces are capable of ensuring lasting victory.

The essential question regarding the use of military force is not how to most effectively apply the military means at hand (tactics and operations) but rather, how to use military means to "fulfill the ends of policy."[29] War by precision firepower can all too easily become killing without purpose. There is no single-dimensional military solution to winning the peace.

War is a political act; it might have its own grammar, but it does not have its own logic. Clausewitz reminds us that the "superiority one has or gains in war is only the means and not the end; it must be risked for the sake of the end."[30] Current U.S. joint doctrine agrees with Clausewitz, cautioning that "wars are fought for political goals. Wars are successful *only when political goals are achieved and these goals endure*" [emphasis in original].[31]

Warden has Clausewitz wrong when he says that the physical aspect of an opponent's power to resist can be separated from his will to resist. Both must be defeated to achieve one's ends in war.

Clausewitz is instructive here on the need to render an opponent permanently helpless: "If our opponent is to be coerced you must put him in a situation that is more oppressive than the sacrifice you call on him to make. The hardship of that situation must not be of course merely transitory—at least in appearance. Otherwise the enemy would not give in but would wait for things to improve. . . . The worst of all conditions in which a belligerent can find himself is to be utterly defenseless."[32]

***In [a] sense, precision firepower is a tool for believers in gradualism, escalation, and punishment game theory. Precision firepower advocates can fall prey to the fallacy of mirror-imaging—the belief that the enemy will respond to our actions in ways we ourselves would respond. Of course, the destructive physical effects airpower delivers might or might not affect the enemy the way we anticipate.***

U.S. Army doctrine, in line with joint doctrine and Clausewitz, states the following about achieving victory in war: "With their inherent qualities of on-the-ground presence and situational understanding, Army forces make permanent the otherwise temporary effects of fires alone. Domination that extends from the certainty in the minds of enemy commanders that close combat with Army forces, backed by superlative U.S. air and naval forces, will have two outcomes: destruction or surrender."[33]

Recent opponents have shown great skill at ending U.S. bombing strikes by agreeing to a limited set of cease-fire terms, only then to flout those terms after the attacks cease.[34] Turning military successes into lasting political settlements is the formidable challenge of military strategy that precision firepower theory does not answer.

Operation Enduring Freedom in Afghanistan offers some glimpses into this dilemma. Initially the United States announced the limited aim of destroying the al-Qaeda organization. The Taliban had to be destroyed only because it harbored members of al-Qaeda and refused to turn them over to the United States. But it is clear that the United States also desired that Afghanistan cease being a breeding ground for terrorism and to join the community of peaceful nations. The U.S. toppled the Taliban using air strikes in support of a large ground army from the Northern Alliance. Still, the United States does not control events on the ground. U.S. foreign policy leaders are still searching for a way to prevent Afghanistan from sliding back into anarchy.[35]

By using tribal groups as proxies to do ground combat's dirty work, the United States has increased its military power and political stature to the point that some groups are no longer reliably pliant when it comes to implementing U.S. goals. Some groups have used U.S. air strikes to settle grievances against old neighbors, raising the question of exactly who is a proxy for whom. Most groups openly opposed the regime of Afghan President Mohammed Karzai, and in fall 2002, some began launching attacks on U.S. and allied forces. The limited military victories gained through this "new American way of war" simply did not give us the leverage to impose our will on post-Taliban Afghanistan.[36]

Not all strategists believe precision firepower is a substitute for military strategy, although most advocates tend to gloss over or ignore the idea. RDO advocates caution that the theory is not designed for "long-term commitments or to resolve long-standing disputes."[37] The rapid application of precision firepower is only a *means* to support strategy, not a way or an end in itself. Precision firepower advocates would do well to heed these distinctions.

## Fundamental Changes

One should not deny the importance of precision firepower and related Information-Age warfighting concepts. They are indeed fundamentally changing the tactical and operational levels of war. The relationship between fire and maneuver and airpower and landpower is constantly evolving because of changes in society and technology. The revolution in military affairs being driven by the Information Age is yet another episode in this long process. U.S. policymakers must grapple with these effects as they prepare to use military force in the 21st century. They must not underestimate its usefulness or its limitations. The debate over whether air forces, navies, or armies are most decisive in war is an argument that obscures the strategic question: "How do we achieve policy objectives with military means?"

Unlike technology, the nature of politics between states changes slowly. Overreliance on the effectiveness of precision firepower theory could lead the United States to conduct military operations that fail to achieve the strategic ends for which those operations were begun. This is the seductive, dangerous nature of precision firepower, and it encourages sloppy thinking on two levels: that military strategy consists primarily of targeting and destruction, often

of civilian and military infrastructure instead of military forces, and that this destruction alone will yield results in military and grand strategy without the need to employ ground forces.

The enemy is not a lifeless mass of fixed buildings, information systems, or weapons platforms. Enemies do not surrender their strategic goals using a simple cost-benefit calculation. Mere destruction of the enemy's means of war is not the true aim of war. Victory is achieved when the enemy's will to resist is broken, and he is compelled to act according to his adversary's will. Like water, the will to resist finds a path that allows it to continue, and wars fought primarily with precision firepower tend to leave paths open after strikes cease.

The victor is the one who renders his enemy helpless to resist and thereby compels him to do the victor's bidding. The presence of ground forces is required to prevent the enemy from evading the effects of firepower, from passively resisting, or from restoring his willpower when the destruction from above stops. This requires the artful combination of air and naval firepower with landpower. Precision firepower is not a technological silver bullet for every strategic objective. We should not confuse the means of war for its end. Smart bombs and brilliant weapons alone do not make good strategy. ***MR***

***RDO advocates caution that the theory is not designed for "long-term commitments or to resolve long-standing disputes." The rapid application of precision firepower is only a* means *to support strategy, not a way or an end in itself. Precision firepower advocates would do well to heed these distinctions.***

## NOTES

1. T.R. Fehrenbeck, *This Kind of War* (New York: MacMillan, 1963), 427.
2. John Keegan, *London Daily Telegraph*, 6 June 1999.
3. Richard P. Hallion, *Storm Over Iraq: Air Power and the Gulf War* (Washington, DC: Smithsonian Institution Press, 1992), 254.
4. USAF strategist Phillip S. Meilinger suggests that Guilio Douhet's call for a single defense arm headed by an air arm might have been proven correct after Operation Desert Storm. See Meilinger, "Giulio Douhet and the Origins of Airpower Theory," in *The Paths of Heaven: The Evolution of Airpower Theory* (Montgomery, AL: Air University Press, 1997). See also Air Force Doctrine Document (AFDD) 1, *Air Force Basic Doctrine* (Washington, DC: U.S. Government Printing Office [GPO], September 1997), 12-13, 51, 61.
5. John A. Warden, "The Enemy as a System," *Airpower Journal* 9 (Spring 1995): 41-55.
6. Ibid.
7. AFDD 1, 30. See also AFDD 2, *Organization and Employment of Aerospace Power* (Washington, DC: GPO, 17 February 2000), chap. 1.
8. AFDD 1, 30.
9. Ibid., 51.
10. Price T. Bingham, "Transforming Warfare with Effects-Based Joint Operations," *Aerospace Power Journal* 15 (Spring 2001): 59. The Air Force has also introduced EBO as a way to measure the dollar-cost effectiveness of weapons systems and platforms. See Frank Wolfe, "Air Force Officials to Emphasize Effects-Based Operations in *QDR*," *Defense Daily* 209 (18 January 2002): 1.
11. Jeffrey J. Becker, "Rapid Decisive Operations as Joint Operational Concept," *Army* 2 (February 2002): 50. For the base RDO document, see U.S. Joint Forces Command, *A Concept for Rapid Decisive Operations* (Norfolk, VA: GPO, Final Draft, 25 October 2001).
12. B.H. Liddell-Hart, *Strategy* (New York: Doubleday, 1967), 335. This is to distinguish military strategy from grand strategy, which can be defined as synchronizing the political, economic, information, *and* military instruments of power to achieve the Nation's policy objectives.
13. Certainly not all precision-firepower advocates will accept this definition. There are many terms in this debate: "precision strike," "precision engagement," "global attack," "EBO operations," and "three-dimensional war," to cite some. Each has its own set of principles and definitions. "Precision firepower" seems to best capture the issue's essence. For a discussion of the whole genre, see Daniel Goure and Christopher M. Szara, eds., *Air and Space Power in the New Millennium* (Washington, DC: Center for Strategical and International Studies (CSIS), 1997). For strategists who are somewhat less certain of precision firepower's ability to achieve strategic results, see Benjamin S. Lambeth, *The Transformation of American Air Power: A Rand Research Study* (Ithaca, NY: Cornell University Press, 2000); Robert A. Pape, *Bombing to Win: Airpower and Coercion in War* (Ithaca, NY: Cornell University Press, 1996); Jeffery A. Jackson, "Global Attack and Precision Strike," in *Air and Space Power in the New Millennium* (Washington, DC: CSIS, 1997).
14. For one example of these limitations, see Grant T. Hammond, "Myths of the Air War over Serbia," *Aerospace Power Journal* 14 (Winter 2000): 78-86. Studies of PGM effectiveneness in Afghanistan are still underway. See Hunter Keeter, "Pentagon Downplays Preliminary Look at Weapons Accuracy in Afghanistan," *Defense Daily,* 10 April 2002, 7.
15. The truck was damaged and some of the fighters killed, including a woman with her child. See David Wood, "Fair Targets," *Army Times*, 62, 25 March 2002, 17.
16. There are a number of works on the overestimated effectiveness of strategic bombing. See Conrad Crane, *Bombs, Cities, and Civilians: American Airpower Strategy in World War II* (Lawrence: University Press of Kansas, 1993); and Crane, *American Airpower Strategy in Korea, 1950-53* (Lawrence: University Press of Kansas, 2000); Gian Gentile, *How Effective is Strategic Bombing? Lessons Learned from World War II to Kosovo* (New York University Press, 2001); Mark Clodfelter, *The Limits of Airpower; The American Bombing of North Vietnam* (New York: The Free Press, 1989).
17. Carl von Clausewitz, *On War,* trans. and eds., Michael Howard and Peter Paret (New Jersey: Princeton University Press, 1976), 77.
18. Robert H. Scales, Jr., "America's Army in Transition: Preparing for War in the Precision Age," Army Issue Paper No. 3 (Carlisle Barracks, PA: U.S. Army War College (AWC), Strategic Studies Institute (SSI), December 1999), 13. See also ed., Scales, "A Sword with Two Edges: Maneuver in 21st Century Warfare," in *Future Warfare: An Anthology* (Carlisle Barracks, PA: AWC, SSI), 2001.
19. Michael E. O'Hanlon, "A Flawed Masterpiece," *Foreign Affairs* 81 (May/June 2002): 49-54.
20. Stephen Biddle, *Afghanistan and the Future of Warfare: Implications for the Army and Defense Policy* (Carlisle, PA: AWC, SSI, 20 October 2002).
21. Antulio J. Echevarria II, *Rapid Decisive Operations: An Assumptions-Based Critique* (Carlise, PA: AWC, SSI, November 2001).
22. See Benjamin S. Lambeth, *NATO's Air War for Kosovo: A Strategic and Operational Assessment* (Santa Monica, CA: RAND, 2001), 102-16.
23. See Wesley K. Clark, *Waging Modern War; Bosnia, Kosovo, and the Future of Combat* (New York: Public Affairs, 2001).
24. The case was never formally taken up, but the threat looms large in the future. See Henry A. Kissinger, "The Pitfalls of Universal Jurisdiction," *Foreign Affairs* 80 (July/August 2001): 93.
25. Victor David Hanson argues persuasively that technological superiority, although important, has not been the principle reason for Western military dominance over time. Instead, he proposes that an array of political, social, and cultural institutions is responsible for Western military supremacy. Substituting technology for a lack of will and in place of clear strategic thinking could be the undoing of this historical trend. See Hanson, *Culture and Carnage: Landmark Battles in the Rise of Western Power* (New York: Doubleday, 2001).
26. Phillip K. Meilinger, "Precision Aerospace Power, Discrimination, and the Future of War," *Aerospace Power Journal* 15 (Fall 2001): 12.
27. Joint Publication (JP) 3-0, *Doctrine for Joint Operations* (Washington, DC: GPO, 10 September 2001), III-24.
28. See Stephen Hosmer, *Project Air Force. The Conflict Over Kosovo: Why Milosevic Decided to Settle When He Did* (Santa Monica, CA: RAND, 2001).
29. Liddell-Hart.
30. Clausewitz, 570. See also pages 86-87 for the distinction between theoretical war and the actual conduct of war.
31. JP 3-0, III-25.
32. Clausewitz, 77.
33. Field Manual 3-0: *Operations* (Washington, DC: GPO, 14 June 2001), 1-6.
34. The North Vietnamese suffered terribly from U.S. bombing but still conquered Saigon on 30 April 1975. The U.S. experience in Iraq and the Balkans shows that this lesson has been learned well by our opponents.
35. James Dao, "Bush Sets Role for U.S. in Afghan Rebuilding," *New York Times,* 18 April 2002, 1. See also Michael Zielenger, "In Afghanistan, Senators Urge U.S. to Help Rebuild Nation," *Philadelphia Inquirer,* 2 April 2002.
36. Biddle examines this issue in depth and neatly demonstrates why the "Afghan model" is not an example of firepower determining the outcome and the dangers for U.S. foreign policy of applying this model to future conflicts.
37. U.S. Joint Forces Command, *A Concept for Rapid Decisive Operations* (Washington, DC: GPO, Final Draft, 25 October 2001), v.

*Lieutenant Colonel Timothy R. Reese, U.S. Army, is Director, Cavalry and Armor Proponency Office, U.S. Army Armor Center, Fort Knox. He received a B.S. from the U.S. Military Academy, an M.A from the University of Michigan, and he is a graduate of the U.S. Army War College. He has served in various command and staff positions in the United States, Germany, and Kosovo.*

# Three Revolutions: From Training to Learning and Team Building

TO PREPARE a video program titled "All We Could Be," I interviewed Army leaders about the rebuilding of the Army that occurred from the time of the Vietnam war to Operation Desert Storm.[1] We discussed doctrine, training, leader development, organization, materiel, and soldiers (DTLOMS). While most agreed that the change in Army DTLOMS during this period was evolutionary, all believed that the changes in training were revolutionary. Either the training changes or the improved quality of personnel in the all-volunteer force was the dominant influence in the Army's successful transformation after Vietnam. There has been ample focus on the recruitment of quality soldiers that has led to the individual competence associated routinely with today's special operations forces (SOF). Leaders have not discussed the training dimension as much as they have discussed the value of quality personnel. Yet, it is training that produces quality soldiers.

Change in training has accelerated since Operation Desert Storm. The Army is now passing through an impressive second training revolution and is poised to launch a third that will be more important at every level (strategic, operational, and tactical) than the preceding two. The second revolution enlarged development and emerging institutionalization from training to education. Now there is potential expansion from traditional learning to effective, efficient learning and teaching for individuals, teams, and perhaps, units. The expansion will also build and sustain high-performing teams of leaders across the range of America's Army, including joint, interagency, intergovernmental, and multinational (JIIM) organizations.

## The First Training Revolution

The training revolution began in the 1970s when the emerging U.S. Army Training and Doctrine Command (TRADOC) advanced the following deceptively simple propositions:

- Conduct performance-oriented training; soldiers train best by doing.
- Train to task, condition, and standard (TCS); this is the systems approach to training.
- Realize that all training is evaluation, and all evaluation is training.

These propositions, which spawned an enormous effort to define individual and collective tasks, provided the basis for soldier training and evaluation products that range from soldier manuals to Army training and evaluation programs.

**Conduct performance-oriented training.** In the 1980s, the Navy's successful Top Gun fighter training program inspired the creation of the National Training Center (NTC) as the first of the combat training centers (CTC). Planners also developed an innovative individual and collective training model and sought ways to better distribute training support to soldiers in units. These efforts were successful beyond TRADOC's original expectations and had revolutionary effects on Army readiness.

**Training to task, condition, and standard**. Well-defined, common training requirements drew the active force and reserve forces together by establishing uniform training requirements and assessment across the total force. Soldiers and officers were uniformly trained in their military occupational specialties and officer specialty codes, respectively. This was an enormous benefit to unit leaders in a globally deployed force. The rigor permitted fair, un-

biased assessment of individual task proficiency. TCS was of great value in implementing equal-opportunity programs. Either a soldier performed to TCS, or he did not. If he did, he was rewarded. If he did not, he was out. This standard applied to Active Component (AC) and Reserve Component (RC) soldiers. Without such accepted assessment tools, the Army might not have been able to introduce equal opportunity as rapidly as it did, given America's litigious society.

The component parts of the CTC model are observer/controllers (OCs), an opposing force (OPFOR), the after action review (AAR), and an accurate instrumentation system. The CTC's original mission was to prepare leaders for a unit combat environment. Improved unit mission readiness was highly desirable, but it was secondary to leader development. All current corps commanders have shared the CTC experience of fighting a tough enemy with unrelenting combat requirements while being observed by experienced mentors/coaches/trainers. Company, battalion, brigade, and division commanders experienced the crucible of CTC training and assessment. The Army now has the equivalent of General George Marshall's black book of highly competent leaders from which he made assignments at the beginning of World War II. Today, CTC-revealed "combat producers" are known and assigned with care when combat looms.

**Evaluate training.** An important aspect of training is the enduring effect on leaders of the AAR process itself. The Army is the only army in the world that permits commanders and their tactics to be criticized in front of, and often with the participation of, their subordinates. This has created a vitally important openness in working through success or failure on the battlefield. Openness creates a strong chain of command team and a unit culture during the unit's rotation. Members of the unit work through issues together to beat the OPFOR. Add to this candor the expectation that the OPFOR will fight no holds barred just as an enemy will, and the Army has a superb method for introducing change. If a technique works at the CTC against the OPFOR, troop acceptance is certain. This is a practical vehicle for accelerating assimilation of ongoing Transformation.

**Distributed training support**. Fortunately, TRADOC invested heavily in provisioning training support (supplying training aids, devices, substitutions, and simulations) for individual and collective training in schools and units. While there were occasional failures, excellent material has been developed to support distributed training. Stimulated by the high costs of training a mechanized unit, distributed virtual simulation (originally suing the simulation network), which the Defense Advanced Research Projects Agency created, was expanded and linked with constructive and live simulations in a larger tactical engagement simulation (TES) program.

Through TES, the Army established both requirement and capability-excellent distributed training. Aside from expanding training opportunities (particularly for RC units routinely separated from their equipment), the great power of TES is its ability to train repetitively on all combat tasks, including tasks that are too costly or too dangerous to actually perform on the ground during peacetime. TES enabled continual experiential training for individuals and units, and repetitive training is critical for attaining and then sustaining high levels of task proficiency.

***An important aspect of training is the enduring effect on leaders of the AAR process itself. The Army is the only army in the world that permits commanders and their tactics to be criticized in front of, and often with the participation of, their subordinates.***

By the end of the first revolution, all of the ingredients for a global leap-ahead in training were present and had been assessed during Operations Desert Shield/Desert Storm. All that was required to take advantage of emerging training opportunities was the Internet.

There had been profound improvement in Army training during the 1970s and 1980s. Equally important, the DTLOMS paradigm had been broadly confirmed, ensuring that training fit into balanced force development. Not only was individual-soldier training highlighted, leader training received an equally important status. Leader development became a major Army program. The Army's performance during Operation Desert Storm demonstrated success for all. But that success was not a ceiling, it was a substantial floor that supported accelerated expansion from training to learning (training and education) and teaching in the 1990s.

## The Second Training Revolution

The next steps in the revolution were—

- To draw on the power of the Internet.
- To expand the focus from training to education (grouped in this article as learning).
- To include leaders and self-development in the domains where learning had to be provided.

- To better focus learning by structuring the learning experience.
- To increase the intensity of learning experiences.

Effective distributed learning to standard has been an Army objective for years. The Army exported print and video media used for classroom instruction to distributed classrooms and to units. After an unsuccessful beginning in the 1970s with training extension courses on videodisc, trainers distributed content through the use of CD ROMs. The Army developed various combinations of synchronous and asynchronous instruction that drew on telephone-linked computers or satellite-distributed courses using video-teleconferencing techniques. The proponent school exported course and classroom instruction to schools or units.

***As the spectrum of conflict broadened from a focus on midintensity conflict to low-intensity conflict, SASO, and counterterrorism, the need for adaptive, self-aware officers grew. The central conclusion of the recent Army Training and Leader Development Panel was that officer and NCO preparation in "how to think" as well as "what to think" should be increased.***

Modifying content for effective distributed learning is difficult and costly. There are reservations about the effectiveness of using material designed for individual instruction to train teams such as unit staffs. Performance has not yet matched clear potential.

When the new training system, with its associated tools such as AAR and TES, was added to the Internet's emerging capabilities, the training revolution gradually expanded to a learning revolution. As additional educational programs, such as the Command and General Staff Officer Course at Fort Leavenworth, Kansas, employed TES, the distinction between training and education blurred. As the spectrum of conflict broadened from a focus on midintensity conflict to low-intensity conflict, stability and support operations (SASO), and counterterrorism, the need for adaptive, self-aware officers grew. The central conclusion of the recent Army Training and Leader Development Panel (ATLDP) was that officer and noncommissioned officer (NCO) preparation in "how to think" as well as "what to think" should be increased.[2] The blurring between leader education and leader training has intensified as JIIM considerations influence more operations. Now it is no longer a training revolution; it is a learning revolution. Trainers and educators both expect improvements in learning. This is an important change in the Army's expectations for the Objective Force and beyond, and it is an important enabler for the next revolution.

Since the 1970s, individual and collective training domains have been the school and the unit; these two domains, however, are not sufficient. A third domain, professional self-development, needs to be acknowledged. Professional reading has been encouraged for years. Content can be distributed to office or home via the Internet, and the requirements for distributed continuing education grow as the intensity and variety of force deployment increases. As a result, a requirement for self-development programs has become necessary.

Another expansion was the addition of the leader as a focal point of learning preparation.[3] In an organization that professes to be leader-dominant, it is important to focus on preparing warrior leaders to lead, not to manage. The DTLOMS imperatives must address leader development formally. That is, leader development was institutionalized as another obligatory check block in the bureaucracy of force development.

A vital ingredient in learning is the presentation of the proper cue to the learning audience.[4] According to cognitive learning theory, a stimulus or cue triggers or sets the stage for a self-initiated response. Correct, timely cues stimulate good experiential learning. For example, training target acquisition requires correct target representation under varying combat conditions, including battle obscuration and chemical warfare. Cues might also be complex human interactions such as those required to negotiate with a difficult Serbian, Afghan, or Iraqi mayor. The solution to correct, timely cues has been to structure the learning situation. As I said in 1993, "The combination of training requirements [mandated by doctrine and civil restrictions] can be attained only by deliberate design or structuring of the training process to ensure that specific training events occur in the manner and sequence desired to achieve specific task training purposes."[5]

Lane training applied structured learning to live simulation on the terrain. The Close Combat Tactical Trainer provided structure to virtual simulation. The best-structured learning experience is at the CTCs. Mission rehearsal exercises conducted before units deployed to the Balkans in the 1990s are also excellent examples.

Sustaining structured learning experiences is

An OPFOR at Fort Bliss, Texas, uses a Russian AN-2 bi-plane to simulate an unexpected chemical attack.

US Army

***CTC OPFORs, including those of the Battle Command Training Program, are proud of their ability to replicate any potential enemy. They can make units fight a worst-case enemy as determined by national intelligence agencies. These CTC fights can be linked to CALL at Fort Leavenworth, to provide timely feedback from ongoing combat operations so that learning cues are current.***

costly and complex because the experience must faithfully recreate actual operations if the learning cue is to engender seamless transition from training to operations. Cues change as operations progress, so updating based on detailed feedback from combat operations must be continuous. When leaders can use structured learning situations repetitively, exceptional learning takes place.

Varying the learning structure can intensify the learning experience. At the CTCs, increasingly experienced OCs introduced much of this variety. The best students were invited to become OCs, and the best OCs returned to the CTCs for repetitive tours of duty. This understanding of practical learning in a tactical environment is reflected in the experience base of the most senior leaders at the CTCs.

A typical NTC rotation provides an illustration of how intensifying the learning experience makes for great training. Keep in mind that the general officer from the unit in the rotation and the NTC's commanding general decide actions at the NTC. The units in training do not know what the general officers have scripted.

Depending on the unit's progress, the OPFOR is allotted daily battlefield enablers such as attack helicopters or persistent or nonpersistent chemical attacks to use against the unit in rotation. The normal guidance is to employ what the unit seems competent to handle "and then some." If a unit has not learned from a particular mission, it "recocks" and executes the same mission again.

Battlefield operating systems (BOS) meter the number, frequency, and complexity of the tactical situations presented to the unit. As each BOS becomes operational, it is stressed. Depending on how challenging the unit's actions are to be and how many BOS will be stressed simultaneously, the OCs present cues to the unit to trigger action. The OCs can vary the cues' complexity enormously.

The results are memorable learning and teaching experiences tailored to individual, leader, and unit capabilities. Intensity is varied to sustain the most effective learning environment. Having observed many engagements conducted during more than 100 CTC rotations, I attest to the remarkably improved efficacy and efficiency of tactical learning.

## The Emerging Third Revolution

The effects of the two sequential revolutions multiply as in a geometric progression. There is substantial reason to expect this growth to continue as the ingredients of a third revolution appear. Several ingredients are now present. The Army has many exceptional ex-OCs, competent leaders who know how to draw on current learning tools to structure and intensify learning to develop high-performing individuals, leaders, and units. CTC OPFORs, including those of the Battle Command Training Program,

are proud of their ability to replicate any potential enemy. They can make units fight a worst-case enemy as determined by national intelligence agencies. These CTC fights can be linked to the Center of Army Lessons Learned (CALL) at Fort Leavenworth to provide timely feedback from ongoing combat operations so that learning cues are current.

***Soldiers are always part of vertical teams because the Army is a hierarchical organization. At the same time, soldiers are members of horizontal teams with buddies, wingmen, or peers at the same echelon. Therefore, it is necessary to prepare teams from the operational unit or organization.***

The ATLDP recommends increased use of CTC expertise for doctrine development, thus closing the loop to responsive adjustment of doctrine and tactics, techniques, and procedures (TTP) to ongoing operations.[6] In addition, improved instrumentation measures more detail.

Another ingredient is the AAR process, which conducts mentored discussions of tactical strengths and weaknesses up and down the chain of command. These discussions include an introspective review of battle command and command style. The chain of command is developed as a vertical team of leaders. As the rotation progresses, the outcome can be seen in improved confidence, competence, and frequently, shared vision and trust. The process enables the preparation of high-performing vertical teams of leaders, which is a new domain of leader preparation.

The success of seamless unit handovers in Balkan deployments proves the validity of applying various learning processes to prepare individuals, leaders, and units for successful operations. The process is effective; the job of making it more efficient is a third-revolution task.

The new ingredients that have emerged to accelerate and expand the effects of the past two revolutions include—

- The substantial downward migration of leader tasks.
- The opening of important new learning domains.
- The development of a model to focus leader-team and team-leadership preparation.
- The emergence of powerful Internet-based, military-oriented communities of practice (COP), Army Knowledge Management (AKM), and Army Knowledge Online (AKO).

**Substantial downward migration of leader tasks**. The combination of competent, motivated, volunteer soldiers and distributed tactical data and information are driving task-performance responsibilities down the chain of command. The leading edge of this powering down to ever-lower echelons is present in individual SOF soldiers directing B52 strikes in Afghanistan. Land Warrior will bring these capabilities to the infantry squad of the Objective Force. Corporals are expected to master tasks formerly expected of senior NCOs, who in turn, have assumed many responsibilities formerly expected of officers.[7] All corporals and above should be considered leaders and should be prepared as adaptive, self-aware leaders. Further, they should be trained to assume duties one to two grades higher in the event of casualties.

**The opening of important new learning domains**. The first revolution addressed individual and collective training in institution and unit. In U.S. Army Field Manual (FM) 7-0, *Training the Force*, this training was expanded to acknowledge leader preparation and self-development.[8] This is necessary but insufficient. Teams should be addressed as an important domain, and leader development should be applied to all activities of America's Army.

Formerly, training venues were divided into four domains (figure 1). Individual training had to be prepared for soldiers in schools and in units (domains 1 and 2). In addition, collective training had to be provided to institution and unit, with the majority of the collective training occurring in the unit. The collective training established domains 3 and 4. This created four domains for which effective and reasonably efficient training programs had to be prepared.

FM 7-0 added self-development and leader-development to the mix, creating a total of nine

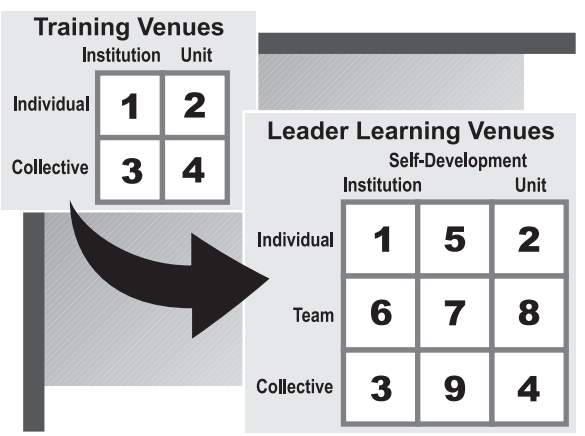


Figure 1. Training venues to leader learning venues.

US Air Force

A joint team transmits data during Millennium Challenge 2002.

***The implications of Transformation and combat in Afghanistan and Iraq are being discussed on companycommand.com. In addition to these voluntary peer relationships, virtual teams of leaders from vertical and horizontal echelons (either grouped or distributed) provide data, information, and knowledge-sharing practices.***

domains. However, that formulation aimed too low in terms of the objectives and the capabilities of America's Army. The leader venue of FM 7-0 should be replaced with a team venue (domains 6, 7, and 8). With the advent of vastly expanded data and information exchanges associated with Army digitization, no one acts alone. At every echelon across BOS, individuals perform as members of teams.

Soldiers are always part of vertical teams because the Army is a hierarchical organization. At the same time, soldiers are members of horizontal teams with buddies, wingmen, or peers at the same echelon. Therefore, it is necessary to prepare teams from the operational unit or organization (domain 8). It is also important to develop doctrine and TTP for "how to team" that is prepared and learned by individuals in the institution (domain 6). An essential complement is how to develop the skills, knowledge, and attributes (SKA) of productive team members through team self-development (domain 7). Domains 5, 7, and 9 are vitally important because they represent the initiative characteristic of America's Army. Clearly, however, more learning and research and development of appropriate supervision, mentoring, assessment, and feedback is required.[9]

A second and more profound change to current doctrine is the expansion of all nine domains from training to leader learning and teaching. The Army prepares leaders as high-performing individuals, as leaders of teams (crews, sections, staffs, commanders), and as leaders of elite units or organizations (the Ranger Regiment, for example). The dominating objective of all individuals, teams, units, or organizations is excellence. Neither training nor education is adequate by itself to create adaptive, self-aware leaders. Some of each is always necessary. Combining training and education is essential.

SKA, or their equivalent, are required for each of the nine domains. For example, the SKA for team preparation are separate and distinct from those essential for individual leader preparation. FM 22-100, *Leadership,* provides the latter.[10] Unfortunately, the doctrine only addresses individual leader preparation. Team leadership should consist of a shared vision or purpose, shared trust, shared competence, and shared confidence. Note the repetitive requirement for sharing SKA. In each case, a team's SKA is not the same as an individual's SKA. Think of the shared SKA as the overlap area in a Venn diagram.[11] Developing team vision, trust, competence, and confidence is essential to preparing and

sustaining high-performing teams. Similar SKA become collective tasks for units and organizations to acquire in order to become high performing. For tactical units, these SKA are developed in the alchemy of superior unit performance created at CTCs.

**A model for leader-team and team-leadership preparation.** Figure 2 indicates a way to think about leader teams. The horizontal areas represent echelons of command from platoon to division. The vertical areas are BOS. A horizontal staff team, consisting of the S2, fire support officer, and S4 is shown at battalion. The dotted arrow represents the vertical chain of command. Note in the Intelligence BOS, that the leader-team is a combination of commanders and staff officers (S2s and military intelligence unit commanders). I call this a chain of functional support, seen regularly among NCOs. Often, there are other command and staff teams that cross functional lines. Last is the requirement for competence, confidence, purpose, and trust. The chain of command is the most important team of leaders, but other teams, such as chains of functional support, also need preparation if a unit is to be high performing.

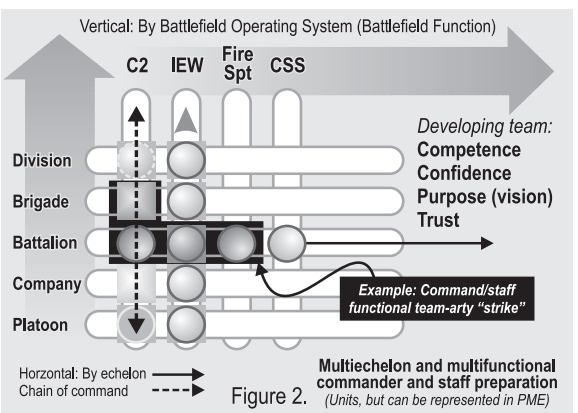
What if joint or multinational operations are involved? Figure 3 addresses that in a SASO environment. Notice that the vertical areas now represent vertical teams responsible for SASO functional areas, such as negotiations. A NATO division has been interjected. No longer is it an Army chain of command with well-understood responsibilities and authorities; it is a chain of coordination.[12] A command-staff functional team consisting of commanders, force protection, and information operations staff leaders addresses a riot threat.

Since the events of 11 September 2003, teams are increasingly likely to be JIIM. In fact, JIIM seems likely to be the area of greatest application of the leader-team preparation model. Other agencies or organizations operating in a JIIM environment will have little or no knowledge of Army doctrine and TTP. Nor will there exist JIIM BOS to frame actions. Nor will there be learning/teaching as occurs in chains of command or chains of functional support. Doctrine and TTP for chains of coordination in JIIM evolve through practice in various multinational counterterrorism operations. For now, the model might support best by indicating from where the various leader teams might come or where they might be prepared.

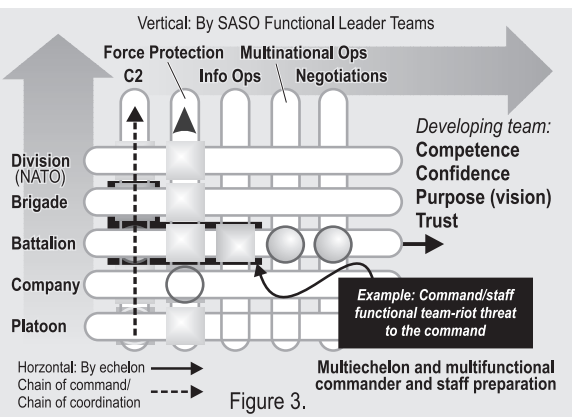
Many individual leaders, leader teams, and lead units need to be prepared. Most learning tools were developed in the second revolution, but they have not been applied to the various learning audiences mentioned. In fact, the Army doctrinal page seems blank in some of these areas. CALL currently addresses only individual leaders and not teams of leaders. This leaves room for third-revolution exploitation. When including emerging Internet capabilities that link individuals, teams, and units globally, even more room exists for potential exploitation.

**The emergence of powerful Internet-based, military-oriented COPs, AKM, and AKO.** Effective communication encourages routine exchange of data and information. This is true vertically for the exercise of command and horizontally for coordination. Less appreciated is the recent emergence on the Internet of virtual COPs that address important professional issues. Currently, there is one officer COP and one NCO COP.[13] Both are growing, and the Army will soon launch similar sites, such as battalioncommand.com and platoonleader.army.mil/ to discuss important issues. In time, there will be a family of COPs where concerned professionals can share data, information, and knowledge.

In COPs discussions, the merits of alternative methods are often considered. Mentors direct the discussions to subjects of mutual interest. Recently, the implications of Transformation and combat in Afghanistan and Iraq are being discussed on companycommand.com. In addition to these voluntary peer relationships, virtual teams of leaders




Leader team (commander and staff) preparation model.




Leader team (commander and staff) SASO preparation model.

from vertical and horizontal echelons (either grouped or distributed) provide data, information, and knowledge-sharing practices. Many opportunities exist to stimulate leader-team acquisition of the SKA of high-performing teams. Some of these opportunities might come from a distributed chain of command that is likely to assemble only after deployment or in a chain of coordination assembled in the objective area.

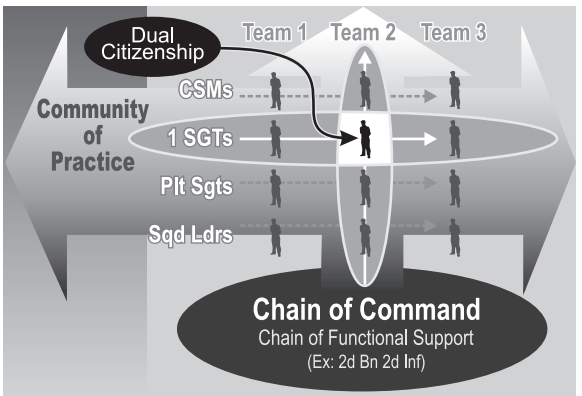



Figure 4. Exchanges of data, information, and knowledge in "double knit" relationships.

Added to this are horizontal or peer COPs that support vertical virtual teams of leaders in execution of their responsibilities. This interaction of vibrant vertical and horizontal exchanges of information and knowledge is termed "double knit."[14] Figure 4 illustrates how this can occur in a tactical unit. In this case, horizontal COPs at each leader level support the vertical chain of command or chain of functional support (team 2).

The third revolution will use these new ingredients to create and sustain high-performing leaders as individuals; as vertical and horizontal teams of leaders; and as leaders of highly proficient units.

## Potential Applications

The third revolution would support the preparation and maintenance of high-performing individuals, leader teams, and units of the active force. Additional applications could be used to create high-performing teams in units composed of late additions to the task organization, including—

- Joint forces en route to an objective area.
- Teams in units anticipating lateral entry of highly qualified reservists, Department of the Army civilians, contractors, or retirees.
- Teams of personnel drawn from JIIM organizations grouped for overseas counterterrorism operations.
- Teams hastily assembled for Homeland Defense under a state governor.[15]

Whatever the contingency, the new learning capabilities likely to emerge during the third revolution will focus on intensified learning practices and emerging distributed learning and team building. These new capabilities also could be provided to high-performing teams experiencing substantial leader personnel turbulence or turnover. Even if the Army succeeds in establishing a unit-replacement system, functional support will still change as organizations adjust to the right mix of combat, combat support, and combat service support capabilities needed to dominate enemies. Individual leaders need to develop high-performing leader teams in lead units. These requirements and new capabilities will expand across the full spectrum of JIIM organizations. Thus, the advances of the first and second revolutions will launch and support the third. It would be a serious error to draw on this emerging whole, which is much greater than the sum of its parts, to fix the past rather than to invent a better future. ***MR***

### NOTES

1. LTG Frederic J. Brown, "All We Could Be," *AUSA,* on-line at <www.firstpersonaudio.com/2002/html/video-allwecouldbe.html>, 2002.
2. For an excellent summary of ATLDP, see Joe LeBoeuf, "Case Study No. 3: The 2000 Army Training and Leader Development Panel," *The Future of the Army Profession,* ed., Don M. Snider and Gayle L. Watkins (New York: McGraw-Hill, 2002), 487-504.
3. See U.S. Army Field Manual (FM) 7-0, *Training the Force* (Washington, DC: U.S. Government Printing Office [GPO], 21 October 2002), I-4.
4. This challenge first emerged for company-size maneuver units when the tube-launched, optically tracked, wire-guided missile (TOW) was fielded. With a range of 3,000 meters and a night sight, the TOW made it exceedingly difficult to replicate combat cues for routine training. Only battalion or higher had the resources to support company TOW training. Thus began centralization of Army training.
5. Brown, "Training Third Wave Landpower: Structured Training," *IDA P-2947* (December 1993): S-1.
6. LeBoeuf, 497.
7. For a discussion of the effect of "cascading excellence," see Brown, "Transformation under Attack," *Military Review* (May-June 2002): 7. For implications of junior leaders, see Brown, "Imperatives for Tomorrow," *Military Review* (September-October 2002): 87.
8. FM 7-0.
9. In a perceptive commentary, Jack Hiller suggests that self-development be retitled to semiautonomous and that a substantial mentoring program be considered for domains 5, 7, and 9 to provide "feedback from a respected mentor for learning tactics, strategies, agility and flexibility."
10. FM 22-100, *Military Leadership* (Washington, DC: GPO, 31 August 1999).
11. Venn diagrams link two items by their characteristics or attributes. For more information, see <www.graphic.org/venbase.html>.
12. For more on chains of command, chains of functional support, and chains of coordination, see Brown, "Vertical Command Teams," *IDA P-2728* (June 2002).
13. For more information, see companycommand.com and squadleader.com.
14. Etienne Wenger, Richard McDermott, and William M. Snyder, *Cultivating Communities of Practice* (Boston: Harvard Business School Press, 2002), 18-21.
15. DA white paper, "The Objective Force in 2015," final draft, 8 December 2002, 11. Available on-line.

*Lieutenant General Frederic J. Brown, U.S. Army, Retired, Ph.D., commanded in Vietnam, the United States, and Europe. Staff service included Headquarters, Department of the Army (HQDA); the Joint Staff; the National Security Council Staff; and the West Wing White House Office of the President. He served as the Deputy Chief of Staff for Training, TRADOC, and directed Army Training 90, the Army's concept plan for training system implementation. Currently, he provides executive level counsel and technical expertise to HQDA for the development of the Warrior Knowledge Network.*

# Mentoring: Building a Legacy

Colonel Jack D. Kem, U.S. Army, Retired

Mentoring is capturing the attention of many in the military today. Therefore, the new generation of Army leaders should master the latest mentoring techniques. Fortunately, no one has a solid idea of what mentoring really is, so it is possible to pick and choose from a variety of techniques for the one best suited for participants' personalities and ambitions. Proper mentoring allows people to get ahead and make names for themselves. And not only is mentoring fun, it can pay off.

*Merriam-Webster's Collegiate Dictionary* gives two definitions for the word "mentor." The first is, "a friend of Odysseus entrusted with the education of Odysseus' son Telemachus. The second is, "A trusted counselor or guide, tutor, coach."[1]

From a mentoring standpoint, you should remember the three characters in the story about Odysseus and Mentor. The first is Odysseus, also known as Ulysses; the second is his son, Telemachus; and the third is the goddess Minerva, who takes the form of Mentor. Odysseus, who is joining the Greeks to bring back Helen from far-off Troy, is worried about leaving Telemachus. So, Odysseus asks Mentor to watch over Telemachus. Mentor takes the job seriously: "In the meantime I will go to Ithaca, to put heart into Ulysses' son Telemachus; I will embolden him to call the Achaeans in assembly, and speak out to the suitors of his mother Penelope, who persist in eating up any number of his sheep and oxen; I will also conduct him to Sparta and to Pylos, to see if he can hear anything about the return of his dear father—for this will make people speak well of him."[2]

Odysseus trusted Mentor to educate Telemachus. There was no established reciprocal relationship that Mentor and Telemachus had developed over time. The relationship was assigned, and Telemachus did not, at first, know of it.

Consider the following quote, which illustrates the development of the relationship between Mentor and Telemachus, with Mentor clearly playing the role of the coach: "Minerva [Mentor] led the way and Telemachus followed her. Presently she said, 'Telemachus, you must not be in the least shy or nervous; you have taken this voyage to try and find out where your father is buried and how he came by his end; so go straight up to Nestor that we may see what he has got to tell us. Beg of him to speak the truth, and he will tell no lies, for he is an excellent person.'

"'But how, Mentor,' replied Telemachus, 'dare I go up to Nestor, and how am I to address him? I have never yet been used to holding long conversations with people, and am ashamed to begin questioning one who is so much older than myself.'

"'Some things, Telemachus,' answered Minerva, 'will be suggested to you by your own instinct, and heaven will prompt you further; for I am assured that the gods have been with you from the time of your birth until now.'"[3]

Minerva is clever. She has taught Telemachus all kinds of things, and now she wants him to acknowledge these things as instinct. Properly coached and taught, protégés can also learn how to act. A good mentor will convince them that their actions are a result of their own ideas, their own instincts.

## Army Doctrine

Even fewer people read Army doctrine than read the classics, but that is where Army mentors should look for guidance. U.S. Army Field Manual (FM) 22-100, *Army Leadership*, states, "Mentoring is the proactive development of each subordinate through observing, assessing, coaching, teaching, developmental counseling, and evaluating that results in people being treated with fairness and equal opportunity. Mentoring is an inclusive process [not an exclusive one] for everyone under a leader's charge. . . . Mentoring is totally inclusive, real-life leader development for *every* subordinate. Because leaders don't know which of their subordinates today will be the most significant contributors and leaders in the future, they strive to provide *all* their subordinates with the knowledge and skills necessary to become the best they can be—for the Army and for themselves [emphasis added]."[4]

Note that the Army's doctrinal view is that leaders should mentor *everyone* under their charge. Of course, one of the big objections to this approach is that it is simply leadership not mentoring. Real leadership is more than just mentoring, but mentoring certainly falls within the scope of good, old-fashioned leadership. FM 22-100 further defines mentoring by clearly stating the three components of Army mentoring—teaching, developmental counseling, and coaching: "Mentoring links operating leader actions to improving leader actions. When you mentor, you take the observing, assessing, and evaluating you do when you operate and apply these actions to developing individual subordinates. Mentoring techniques include teaching, developmental counseling, and coaching."[5] The definitions of the three major mentoring components follow:

- Teaching gives knowledge or provides skills to others, causing them to learn by example or experience.

▯ Developmental counseling is subordinate-centered communication that produces a plan that outlines the actions necessary for subordinates to take to achieve individual or organizational goals.

▯ Coaching involves leaders assessing performance based on observations, helping subordinates develop an effective plan of action to sustain strengths and overcome weaknesses; and supporting subordinates and their plans.

Army doctrine states that leaders are to mentor everyone under their charge and that mentoring includes teaching, coaching, and counseling. FM 22-100 also states that mentoring is critical: "Mentoring isn't something new for the Army. Past successes and failures can often be traced to how seriously those in charge took the challenge of developing future leaders. As you consider the rapid pace of change in today's world, it's *critical* that you take the time to develop leaders capable of responding to that change [emphasis added]. The success of the next generation of Army leaders depends on how well you accept the responsibility of mentoring your subordinates. Competent and confident leaders trained to meet tomorrow's challenges and fight and win future conflicts will be your legacy."[6]

## Types of Mentors

There are four basic types of mentoring relationships. Each has advantages and disadvantages that allow enormous flexibility in choosing the type of mentoring that best fits the personalities involved.

**The ce-mentor relationship.** This relationship provides the three components of Army mentoring for all subordinates. Its focus, creating a solid foundation for the future, occurs while the subordinate is under the mentor's charge. The relationship does not have to be long term, but it can develop into a long-term relationship if that is desired. This is simply good leadership that develops subordinates for the long term.

There are advantages and disadvantages of the ce-mentor relationship that depend on perspective and motivation. Properly done, the ce-mentor relationship not only makes units better but also makes the whole Army better. Developmental counseling looks beyond the parameters of performance counseling—the current rating period or a recent event. Developmental counseling should also look at the whole person rather than just at the person's performance. Teaching and coaching do not focus solely on behaviors and actions. They focus on understanding and applying principles.

The ce-mentor relationship applies to everyone, not just favorites. At the beginning, the relationship might not be reciprocal; some do not really want any help in their development. Over time, leaders can expect subordinates to accept comments, but there will always be some that are not receptive, even to constructive comments. The mentor must set a good example, but does not need to be perfect. Yet, if he expects others to improve, he will have to display in himself the same openness to change and improvement.

Ce-mentors will care about their people. They will see their protégés' potential and help them realize that potential. There is little personal glory in a ce-mentor relationship. A great ce-mentor relationship will produce more competent leaders for the future rather than create disciples of different leaders. The ce-mentor relationship is a short-term relationship with a long-term focus.

**The com-mentor relationship.** This style of mentoring is the standard. The com-mentor relationship is a reciprocal relationship that endures over time. Some mentor-protégé relationships seem to click, and both sides continue to share thoughts and ideas. This can be a result of the ce-mentor relationship, but it does not have to be. Under the com-mentor relationship, the protégé does not have to be in the mentor's rating scheme. It may even be advantageous for the com-mentor to be outside the rating chain to serve as a sounding board.

The com-mentor is not a sugar daddy. He provides sage advice and direction, and does not get the protégé a plum job or make things happen for the protégé. A good com-mentor provides advice, offers insight, and lays out options at various decision points so the protégé can make informed decisions.

Much like a good ce-mentor, the com-mentor might have to exert a little tough love—be frank and honest. I write to a couple of com-mentors a few times a year to ask for advice. Sometimes they do not give me the answer I think is best, but they always offer what they think will be best for me in the long term. This tough love and honesty takes some getting used to, but it is valuable.

The com-mentor relationship is rather unique. Many protégés are fortunate to have two or three com-mentors to call on when they need advice or when they need someone to listen to them. Both the com-mentor and the protégé must work at this relationship to keep channels open. Like the ce-mentor, a good com-mentor must set a good example, be receptive to improvement, and care about the protégé. This relationship works best when it is kept personal and private; it is not the best way to create an army of disciples. The com-mentor relationship is a long-term relationship with a long-term focus.

**The tor-mentor relationship.** The tor-mentor relationship is the standard sugar-daddy type of mentoring that many speak of with disdain but secretly desire for themselves. Both protégé and mentor torment one another with demands on the other. Demands that enhance their respective careers. This type of mentoring does not have to be reciprocal as long as neither member severs the relationship. In fact, either party can be the real tor-mentor. There are two variants of this type of mentoring.

The *coattail tor-mentor* is that great sugar-daddy relationship whereby the protégé knows someone senior who can make things happen. As long as the mentor can make things happen, the relationship is cultivated and maintained. The mentor might become irritated by this, but that is immaterial to the protégé as long as the mentor does not end the relationship. The fact that the relationship is irritating can work to the coattail tor-mentor's advantage; he might get what he wants just so he quits calling the to-rmentor. This type

of relationship could backfire, however, so a good, self-serving coattail tor-mentor must artfully manage the relationship and only ask for favors the mentor can deliver quickly.

The *reachback tor-mentor* chooses favorites to help or uses prepositioning to build his team for success at every assignment. The reachback tor-mentor offers help on assignments, even when help is not needed or desired. This is great for building a legacy. Protégés travel the road to success because of the mentor. If a mentor adopts this type of mentoring, he has little fear of his protégés severing ties because he is, after all, senior in this relationship. The key is to find great protégés and then help them as much as possible. If the protégés join the tor-mentor's team and join in every assignment, the mentor can "ride those horses" all the way to his own success.

Both tor-mentor relationships are great for building a legacy. The mentor really does not need to worry about setting an example or care about the protégés' development. The mentor's success is measured by getting things done now. To deflect criticism for using protégés in the tor-mentor relationship, the mentor can cite mission accomplishment. Who can argue with that? The tor-mentor relationship is a long-term relationship with a short-term focus.

**The de-mentor relationship.** This is arguably not a type of mentoring at all, but it passes as mentoring in many circles. In this relationship, all the right words are spoken with the proper enthusiasm to indicate mentoring is taking place. Both the mentor and the protégé go through the motions of proper mentoring, but the de-mentor relationship has no substance and no impact except for using the right buzzwords such as "established a highly successful, proactive mentoring program within the unit" prominently in efficiency reports.

One of the pitfalls of a de-mentor program is that it is relatively easy to identify. Units that have great buzzwords and slogans are particularly prone to having de-mentor programs. I have always been suspect of units that prominently post "Mission First—People Always" as their slogan. What happens when the mission and people are not compatible? For example, what happens when troops go to Bosnia for yet another rotation and divorce rates in the unit climb? The reality might be "Mission First—People Best We Can."

But the de-mentor relationship and even slogans can affect the Army positively. Someone might listen to the words and think about them. Somewhere down the road those words might take root and gain some substance. The de-mentor relationship is a short-term program with a short-term focus.

There are other mentoring programs worthy of note, although they are not as common as the main four styles. Still, they have pockets of support. The first is the *dor-mentor* relationship. This is the "bolt from the blue" relationship in which either the protégé or mentor contacts the other after an extended dormant period. This commonly happens immediately after the release of a promotion list. It is difficult to characterize this type of mentoring as positive or negative because it can be either. However, a de-mentor relationship is a poor substitute for either the commentor or ce-mentor relationship.

There is also the *la-mentor* relationship. This is the typical pity-party relationship. Anyone can find fault with something in the Army, but it is unfortunate when leaders get caught up in it. This type of relationship is highly contagious.

Last is the *fo-mentor* relationship. Charging windmills like Don Quixote, fo-mentors take on the institution by inciting and rousing others to change for change's sake. Sometimes an institution needs major changes. However, the need for change easily can be overdone by rushing into emotionalism.

Each person should look closely at his definition of mentoring and how he approaches the development of subordinates. The Army needs its leaders to be ce-menters to develop a solid foundation for tomorrow's leaders. Leaders need to cultivate com-mentors for themselves and to be available to others. Teaching, developmental counseling, and coaching are elements of good leadership, but are they practiced daily?

Good leadership requires setting the example and being willing to look inward and improve. Good leadership requires truly caring about soldiers and looking beyond short-term requirements. The right kind of mentoring can produce a real legacy—competent, capable leaders for tomorrow. ***MR***

**NOTES**

1. Merriam-Webster, *Merriam-Webster's Collegiate Dictionary*, 10th ed. (Springfield, MA: Merriam-Webster, Inc., 1998), 726.
2. Homer, *The Odyssey*, trans., Samuel Butler, Book I, The Internet Classics Archive (Cambridge: Massachusetts Institute of Technology) on-line at <http://classics.mit.edu/Homer/odyssey.html>.
3. Ibid., Book III.
4. U.S. Army Field Manual 22-100, *Army Leadership: Be, Know, Do* (Washington, DC: U.S. Government Printing Office, August 1999), para 5-83.
5. Ibid., para 5-85.
6. Ibid., para 5-100.

*Colonel Jack D. Kem, U.S. Army, Retired, is a U.S. Army Training and Doctrine Command mentor with the Directorate of Academic Operations, U.S. Army Command and General Staff College, Fort Leavenworth, Kansas. He received a B.A. from Western Kentucky University and an M.P.A. from Auburn University. His Insights article, "The Balancing Act: The Saga of Major Smith," appeared in the July-August 2002 issue of* Military Review.

# MR Review Essay

## Hamas, Understanding the Organization

Lieutenant Commander Youssef H. Aboul-Enein, U.S. Navy

In *Darb Al-Ashwaak: Hamas, Al-Intifada, Al-Sultah* (Pinprick Strikes: Hamas, the Intifadah and Leadership), (Dar-al-Shirook Press, Nablus, Gaza and Ramalah, translated by Youssef H. Aboul-Enein, 2002), Emaad Abdul-Hameed Al-Falooji gives Middle Eastern readers a comprehensive history of Hamas from its founding in 1987 to the organization's current operational procedures. The book, which brings to light the history, strategy, and tactics of the Palestinian militant group Hamas, details how terrorists use urban populations as a base of operations and support.

Al-Falooji, a former member of the Palestinian Muslim Brotherhood, became a senior adviser to Hamas, but left the organization in 1996 to participate in Palestinian elections, becoming the Minister of Post and Telecommunications in the Palestinian Authority.

Al-Harakah Al-Muqawama Al-Islamiya (the Islamic Resistance Movement, known by the acronym Hamas), was established in Gaza on 14 December 1987 during the Palestinian uprising, Intifadah. The organization grew out of the Palestinian chapter of the Muslim Brotherhood as a means of channeling the rage and efforts of the first Intifadah toward the liberation of all Palestine and the creation of an Islamic state in its place.

Unlike other Palestinian groups, such as the Popular Front for the Liberation of Palestine or the murderous Palestinian Islamic Jihad, Hamas is modeled heavily on the Muslim Brotherhood. The organization has created a community that has social services, schools, and healthcare, while maintaining military wings that carry out suicide bombings. Other Palestinian terrorist groups simply conduct violence without understanding or coordinating the social needs of the population they claim to defend. The Hamas tactic offers a quasi-state and helps endear the population to Hamas, as well as providing a source of recruitment.

### Recruiting Methods

Hamas pays close attention to the recruitment of its members and is alert to any penetration by Israeli agents or rival Palestinian groups. During the early years, there was an intense dislike between Hamas and Yasser Arafat's Fatah group, because Arafat sought to undermine those organizations that undercut its legitimacy to be the sole representative of the Palestinian people. Hamas used the Muslim Brotherhood as a model for recruitment and promotion to fill its membership.

A prospective member of Hamas must first attempt to observe all the required Muslim prayers of the day. Once the member's transformation and sincerity in observing Islamic rituals is satisfactory to the recruiters, he is brought into a small usra (family) that monitors the person's spiritual progress. At this stage, recruits typically learn two sections of the *Quran* (Amaa and Tabarak) and learn selected hadiths (prophetic sayings). In addition, the recruit is introduced to the Muslim Brotherhood ideology of takfir (excommunication), the need to isolate oneself from sin, and to the jihad as a means of warfare. Not everyone successfully completes the indoctrination period, which lasts 18 months. However, if the person does succeed, he becomes an operative member and is assigned to a membership cell. During the indoctrination period, the recruit is assessed for skills, leadership potential, and ability within the membership cell. Based on his evaluation, and if he shows leadership abilities, he is given further training, designated a full member, and assigned as a captain or lieutenant.

### Hamas Organization

Hamas consists of five major jihaaaz (apparatus).

**The Al-Ahdaath (Events) Apparatus.** The Events Apparatus is responsible for coordinating events on the street, organizing turnouts for demonstrations, funerals of martyrs, and commemorations of special events. Al-Ahdaath produces leaflets and flyers to keep Palestinian communities informed of what is going on and enforces strikes that have been called by Hamas or Yasser Arafat's Fatah movement. It also provides first aid to Palestinians participating in street agitation. By acting as the eyes of Hamas leaders, Al-Ahdaath reports street developments and mass protests to help leaders decide what level of escalation to employ.

**The Al-Ilaami (Media) Apparatus.** The Media Apparatus monitors the international media to gauge what effect mass demonstrations and suicide bombings have on Arab and world public opinion. Al-Ilaami produces all internal publications for its members, and it prepares reports and lessons-learned on operations and certain studies commissioned by Hamas leadership. Al-Ilaami issues communiqués to the worldwide media, with an emphasis on perceived Israeli atrocities. It also trains a cadre of journalists who report for Hamas, its publications, and its website. Finally, Al-Ilaami monitors conferences to determine if they are of interest to the Hamas and whether to send delegations.

**The Al-Amn (Security) Apparatus.** The Security Apparatus is the key section responsible for preventing infiltration by Israeli agencies, informants, or Palestinian groups wanting to undermine Hamas. Al-Amn develops detailed security plans and trains members in operational security; conducts background checks on all

those wishing to join the movement; and undertakes surveillance of suspected collaborators and Palestinians who are contacted by the Israelis. In addition, Al-Amn reconnoiters Israeli forces, looking for movement of their units and troop concentrations; monitors the activity of Hamas cells and other divisions of the organization; and collects intelligence on other Palestinian liberation movements. It provides protection of the movement's leaders and assesses what information Israeli sweeps and detention of Hamas members might have compromised.

**The Al-Askary (Military) Apparatus.** Sheikh Ahmed Yasin, the spiritual founder of Hamas, proposed the need to establish a military wing that would reach beyond organizing strikes and orchestrating street violence. He gave the task to Sheikh Salaah Muhammad Shehaada, who was killed in an Israeli airstrike on 23 July 2002. Shehaada had organized the first military cell, called Al-Mujahiddon Al-Filasteeneen (the Palestinian Mujahideen). The book lacks details on this event, but it does say that Fatah militants released from Israeli jails were recruited to form the organization's military wing. Shehaada proposed the establishment of 12 military groups, each consisting of three to five people geographically dispersed throughout the West Bank and the Gaza Strip. In addition to the 12 groups, five groups were held in reserve in case a cell was discovered. The groups were trained in firearms, demolitions, kidnapping, and suicide missions. Each cell carried out one military operation a month, allowing Hamas to undertake 12 operations a year, giving each cell a 1-year rotation to plan, train, rehearse, and recruit for an operation. The group conducted training on purchased land with underground training sites and firing ranges.

When the group first solicited funding from outside sources, funding was initially denied because of the fear that Israel would conduct a retaliatory strike after the group's first mission was carried out. This created a source of tension between Al-Falooji and the foreign government representative who was sent to discuss the formation of a military apparatus.

Al-Falooji highlights four major objectives of the armed wing of Hamas:

- To conduct painful strikes within Israel to ensure the Israeli government knows there are consequences to attacking Palestinian civilians.
- To conduct military operations to attract the attention of the world and the United Nations to force a solution to the Palestinian problem.
- To conduct strikes to raise the morale of the Palestinian people and to assert its authority on the street.
- To conduct military strikes against the Israeli people to send the message that they have no place in Palestine and that they cannot easily attain the security they desire.

These goals define the types of targets Hamas would engage through suicide operations, guerrilla action, and terror campaigns.

**The Ansar (Helpers) Apparatus.** The Helpers Apparatus is best described as Palestinians who are not full members of Hamas but who can participate and assist in the movement's activities. Al-Falooji details three conditions to become a Helper of Hamas:

- Be supportive of Hamas doctrine and goals.
- Follow Islamic conduct and ideals.
- Undergo a security check to ensure the candidate is serious about becoming a member of the Helpers group.

Members of the Helpers eventually merge into the main membership. The main recruiting grounds for Helpers are high schools, colleges, and unions. Al-Falooji does not give details about how Helpers are given full membership, except that there was tension between the Helpers and full Hamas members until the issue of equality was resolved.

## Methods of Internal Communication

One of the more incredible parts of the book discusses how the organization developed operational security. Al-Falooji claims that operational security was developed by observing the KGB (the Soviet Secret Police and intelligence agency) and, amazingly, from watching films. The author highlights the use of dead drops and ciphering.

One example of dead drops has the author requesting a Hamas member to go to a certain mosque, at a certain hour, wearing certain clothing, sitting in a certain area of the mosque, and sitting in a certain way. A question would be asked such as, "Excuse me, what time is it?" The response would be, "Our appointment is with heaven, God willing." The member would then surrender a sealed message. All these prearranged actions had to take place or the courier would calmly leave the mosque.

Al-Falooji details the Quranic cipher method of writing reports and messages, which involves a verse from the *Quran*. Ciphering methods use certain verses and only letters from these verses for encryption. Others include letters from verses numbered and used to encode messages. He claims that one of the most popular verses is number 29 of *Surat al-Fath*.

Al-Falooji's book is autobiographical and, therefore, contains many references to himself, his education, and his role in Hamas. And while the book argues the righteousness of the Islamist cause in liberating Palestine, it is an important contribution to understanding the inner workings of the Hamas organization. It also provides a historical look into how the Palestine Liberation Organization and Hamas reconciled their differences to pursue a common cause in dealing with Israel.

Such books as this, although in Arabic, can give military planners an understanding of the techniques of organized religious militant organizations. Those involved in intelligence, counterterrorism, and regional foreign area officers will appreciate Al-Falooji's book.

*Lieutenant Commander Youssef H. Aboul-Enein, U.S. Navy, is a Middle East Foreign Area Officer currently serving in the Pentagon. For the past several years, he has been working with* Military Review *to bring Arabic topics of interest to the journal's pages.*

# MR Book Reviews

**RIVER TOWN: Two Years on the Yangtze,** Peter Hessler, HarperCollins Publishers, NY, 2001, 402 pages, $26.00.

After obtaining literature degrees at Princeton and Oxford, Peter Hessler joined the Peace Corps and for 2 years taught English literature at Fuling Teachers College in Sichuan, China. His book, *River Town: Two Years on the Yangtze*, is a candid, compassionate, insightful picture of a part of contemporary China little known to Westerners.

Hessler traded the academic dictatorship of deconstructionists and multiculturalists for the major and minor tyrannies of the college's communist bureaucrats, going against their wishes to learn Chinese from private tutors. As Hessler gained fluency in Chinese, he began to speak and listen sympathetically to his students and the local people. He found they spoke more openly about sensitive subjects when speaking in Chinese than when speaking in English.

As a foreigner, Hessler confronted the strangeness of the Chinese to him, his own strangeness to the Chinese, and the rigor of the Chinese educational philosophy, an experience common to all who have studied Chinese in the Chinese world. Hessler's students were examples of the Chinese educational system. They were first-generation college students—the sons and daughters of peasants—who became schoolteachers after they returned to their villages.

For the students Fuling, small by Chinese standards, was cosmopolitan. The city soon underwent radical change. After existing on the river for more than 1,200 years, parts of the city were to be submerged by a lake created by Three Gorges Dam. The dam is an unseen presence in the book, and in dealing with it obliquely, Hessler shows us the way the Chinese people cope with the dictates of a far away, arbitrary government. The ways the people cope are not new, but they were more frenetic in the years of Mao Tse-tung's mass campaigns and mass politics.

Hessler presents many pictures of provincial city life that engage readers' sympathetic attention as he narrates some of his students' and townspeoples' lives. In fact, when leaving Fuling after his 2-year stay, Hessler wonders whether he will ever see the place again, and the reader is mildly shocked to realize that he is not just being sentimental.

Hessler has drawn a picture of a city and a society poised between stasis and change and has given readers insight into the ways Chinese society works outside large national and provincial centers. I recommend *River Town* for all who are interested in how the Chinese interact with foreigners on a day-to-day basis.

**Lewis Bernstein, *Ph.D.*, *Huntsville, Alabama***

---

**THE SLEDGE PATROL: A WWII Epic of Escape, Survival and Victory,** David Howarth, Lyons Press, NY, 2001, 233 pages, $14.95.

*The Sledge Patrol* is a reprint of a 40-year-old book about a small skirmish on the periphery of World War II that helped decide the course of the war. When Germany occupied Denmark, Denmark's Greenland colony quietly seceded, and the colony's governor formed a militia. The militia, patrolling the coasts, prevented German landing parties from establishing military bases on Greenland. The lack of German forces on Greenland bases would have made little difference, except that Greenland offered an excellent position from which to invade Europe.

In Europe, weather moves from west to east, and in June 1944, Greenland weather stations predicted excellent weather conditions. German General Erwin Rommel's weatherman predicted continued storms in Normandy, so Rommel returned to Germany. U.S. General Dwight D. Eisenhower's weatherman consulted Greenland's data, predicted good weather for the Normandy landing, and the invasion was on.

Author David Howarth writes eloquently, even lovingly, about Greenland's frozen terrain, despite the fact that the northern latitudes are so forbidding that all humans are de facto friends. Organizing the Greenland Home Guard from a handful of fiercely independent hunters, who were so few that Howarth describes each in detail, was not as difficult as the terrain. How the men overcame the challenges of patrolling in such a harsh environment provides lessons for soldiers who must conduct operations in severe climates.

**Kevin L. Jamison, *Attorney at Law, Gladstone, Missouri***

---

**ATLANTA WILL FALL: Sherman, Joe Johnston, and the Yankee Heavy Battalions**, Stephen Davis, SR Books, Wilmington, DE, 2001, 215 pages, $55.00.

An Atlanta native and book review editor for *Blue & Gray* magazine, Stephen Davis has written an excellent short history of the decisive Georgia campaign of 1864. Davis covers a large amount of detail in his 214 pages. The result, however, is a readable, concise history of the campaign.

Davis does not let brevity keep him from controversy. He thoroughly reproaches Confederate General Joe Johnston for Johnson's seemingly endless retreating. Davis praises Union General William T. Sherman's actions. Davis also gives a sympathetic treatment of Johnston's successor, Confederate General John Bell Hood and the strategic dilemma he inherited on assuming command of the Army of Tennessee.

On assuming command, Hood was outnumbered three to two; Sherman's armies were within 8 miles of Atlanta and across the last natural obstacle before Atlanta, the Chattahoochee River. Despite these disadvantages, Hood held Atlanta for

6 weeks and did not give up the town without a fight. Davis states that when Hood took command, the fall of the city was inevitable. I believe Davis underestimated the vulnerability of Sherman's logistics. This vulnerability was not exploited, but it could have been.

The book's downside is its price. At $55 for the hardback, the book seems expensive; the paperback, at $17.95, is more reasonably priced. For a balanced treatment of an important and decisive campaign, *Atlanta Will Fall* is well worth reading.

**LTC D. Jon White, *USA,***
***Fort Leavenworth, Kansas***

---

**SHERMAN: A Soldier's Life**, Lee Kennett, HarperCollins Publishers, NY, 2001, 426 pages, $35.00.

For nearly a century and a half, General William Tecumseh Sherman has served as an enigmatic example of the cataclysmic nature of what the renowned Prussian theorist Carl von Clausewitz defined as absolute war. Infamously recognizable for the destructive quality of his Civil War campaigns, Sherman has long been regarded as both hero and villain, the difference dependent on one's location with respect to the Mason-Dixon line. Yet, while many have endeavored to capture the life and times of this controversial Union commander, none has brought to life the true essence of the man until now.

In *Sherman: A Soldier's Life*, award-winning military historian Lee Kennett crafts a uniquely accurate and vivid portrait of one of America's most notable and controversial military leaders. Exhaustively researched and chronicled, *Sherman* ventures beyond previous biographical efforts, focusing not just on the warrior and conqueror, but on Sherman's formative years before the Civil War as well as the eventful decades that followed our nation's darkest hour. *Sherman* is both fascinating and insightful; Kennett's prowess as a researcher and writer are evident throughout, resulting in a thoroughly enjoyable literary effort.

Of interest is Kennett's examination of Sherman's military and historical legacy; in death more so than in life, his campaigns fostered renewed interest and professional study. In the aftermath of World War I, General C.P. Summerall recognized the necessity of the destructive nature of Sherman's campaigns: "The most merciful way to conduct war was to bring it speedily to an end." In 1929, noted British historian B.H. Liddell-Hart published a biography on Sherman, crediting him as the first practitioner of the indirect approach—that most unanticipated and violent of methods that would one day serve as the hallmark of the Wermacht's remarkable sweep across western Europe. Kennett also notes that, as an integral participant in the first campaigns involving operational art, Sherman's own principles are now fundamental to the Army's warfighting doctrine, Field Manual 3-0, *Operations.*

Kennett, a professor emeritus of history at the University of Georgia, is the author of several acclaimed works of military history, including *GI: The American Soldier in World War II* (University of Oklahoma Press, Norman, 1977), *The First Air War: 1914-1918* (Free Press, NY, 1990), and *Marching through Georgia: The Story of Soldiers and Civilians During Sherman's Campaign* (HarperCollins, NY, 1995). In his latest literary endeavor, Kennett spent 5 years researching previously unexploited archival materials, ultimately producing what is undoubtedly the most enthralling and encompassing biography of Sherman to date.

Sherman once stated, "I must be judged as a soldier." If that is so, and we judge Kennett as a historical writer, then *Sherman* emerges as the definitive standard for the contemporary military biography.

A brilliantly composed literary effort, *Sherman* is a worthwhile addition to any library, particularly one devoted to the study of our Civil War.

**MAJ Steven Leonard, *USA,***
***Fort Campbell, Kentucky***

---

**FIGHTING WITH THE SCREAMING EAGLES: With the 101st Airborne from Normandy to Bastogne**, Robert M. Bowen, Stackpole Books, Mechanicsburg, PA, 2001, 256 pages, $29.95.

In 1943 Robert Bowen did what most patriotic Americans were doing—he enlisted in the Army to serve his country. Like many young men, he served faithfully until the war's end, wanting nothing more than to return home alive. Bowen's war experiences changed him forever physically and psychologically, yet in a pattern commonly seen among veterans of that era, he quietly slipped back into the fabric of postwar America. In a nation full of veterans, all with personal, private war stories, Bowen did not feel his experiences were all that unique. Some might be compelled to agree with Bowen if they did not know he had served with the 101st Airborne Division in Normandy, in the Netherlands during Operation Market Garden, and in the defense of Bastogne. Fortunately, 50 years of reflection and a box full of saved wartime letters changed his opinion and now he tells his story.

In *Fighting with the Screaming Eagles*, Bowen tells the familiar story of the 101st Airborne Division in World War II from the less familiar perspective of glider components. Glider troops were an experimental wartime concept. Pilots endured incredible hazards in peacetime training and suffered tremendous casualties in combat employment. They fought stubbornly in the well-known battles of the 101st Airborne Division across Europe but were routinely overlooked in favor of their more glamorous brothers in the airborne regiments. Bowen dispels the unfair second-class stigma attached to glider troops and successfully tells their story.

Bowen also does several other things well in this work. His version of history uniquely captures the thoughts and emotions of a soldier from the 1940s; his narrative reads like a diary instead of a history. His accounts are largely drawn from his own wartime letters, dutifully saved by his wife. The letters, which provide first-hand accounts written within hours of each event, are a treasure of facts and emotions not subject to memories 50 years faded. They are, quite simply, a time capsule of the emotional culture of the period.

Bowen shares several perspectives about combat that are useful and purposeful to the student of warfare. He adroitly identifies that all combat is an individual experience. This is the reason why participants in the same battle, often only a few feet away from one another, recall the

same event differently. Also, Bowen points out that just being a survivor in war is an achievement. His amazing story, from historic pitched battles to prisoner-of-war experience, easily supports that testament.

I highly recommend Bowen's book for several reasons: it is good recreational reading for the historical student; it is a good historical reference of World War II glider troops; and it is an excellent resource for understanding the period experiences of the common infantry soldier.

**MAJ Ted J. Behncke, Sr., *USA, Fort Leavenworth, Kansas***

---

**WAR: Past, Present and Future,** Jeremy Black, St. Martin's Press, NY, 2001, 310 pages, $35.00.

Jeremy Black is a professor of history at the University of Exeter in the United Kingdom. His research interests include early modern British and continental European history, with a focused interest in international relations, military history, the press, and historical atlases.

*War: Past, Present and Future* is a broad survey of war through history. Black relates war in its social and cultural context. The book recounts how the military evolved organizations that were influenced by society, national geography and climate, scientific research and technological development, national leaders, policies and strategy, and geo-political demands. Black addresses the topic with academic rigor and includes over 460 endnotes citing a vast array of sources. The book certainly is not soft reading. The reader must reflect and process the information, which makes the book both interesting and thought-provoking.

**Richard L. Milligan, *Ph.D., Fort Leavenworth, Kansas***

---

**WAR AND REVOLUTION: The United States and Russia, 1914-1921,** Norman E. Saul, University Press of Kansas, Lawrence, 2001, 456 pages, $45.00.

Norman E. Saul's *War and Revolution* contains extensive, useful details on relations between the United States and Russia from 1914 to 1921, and it is definitely a book appropriate for specialists of this topic. The book's greatest strength is its ability to show the nongovernmental connections between Russia and the United States, most of which attempted to bring about greater cooperation between the two countries.

Saul's book is more narrative than argument and contains little material that would interest soldiers and military historians. However, the book adds solid research to a field that has too often focused on official governmental actions.

**MAJ Curtis S. King, *USA, Retired, Leavenworth, Kansas***

---

**GRANT'S LIEUTENANTS, Volume I: From Cairo to Vicksburg,** Steven E. Woodworth, ed., University Press of Kansas, Lawrence, 2001, 264 pages, $29.95.

Inspired by Douglas Southall Freeman's classic *Lee's Lieutenants: A Study in Command: Gettysburg to Appomattox* (MacMillan Publishing Company, NY, 1986), editor Steven Woodworth examines several generals and two admirals who accompanied Union General Ulysses S. Grant during the first few years of the Civil War. Unlike *Lee's Lieutenants,* this work is neither a narrative of the war nor the product of a single author. Woodworth assembled several scholars who each examined one of Grant's subordinates and then analyzed their contributions to Grant and to the successful outcome of the war.

Critics might disagree over the editor's selections of Grant's subordinates. General William T. Sherman was an obvious choice. General James B. McPherson, one of Grant's most trusted subordinates, was another. To ensure consideration of the Navy's contributions to the victories in the Western theater demanded that Union Navy officers Andrew W. Foote and William D. Porter be included. Beyond those, however, the decision became more complex.

Few military historians recognize the name John McClernand, but Woodworth chose wisely to include this politician-turned-general who commanded a division under Grant at Henry, Donelson, and Shiloh, and a corps at Vicksburg.

Another unknown is Charles Smith, who had been commandant of cadets at West Point when Grant was a cadet. In an unusual twist he found himself as Grant's subordinate at Donelson.

W.H.L. Wallace had fought in the Mexican War, returned to civilian life, and then reentered the army in 1861. Wallace also served in Mexico, then practiced law, and finally rejoined the Army. Whether both Wallaces' contributions are so unique to warrant their inclusion is a valid question.

Peter Osterhaus, a general probably unknown to any except a close student of the Western campaign, is an interesting choice for consideration. He was born in Westphalia and immigrated to the United States during Germany's upheavals in 1848. He subsequently commanded a division under Grant.

Rarely is Grenville Dodge associated with Grant. He is included because of his critical efforts to provide Grant logistical support as well as for gathering intelligence.

William Rosecrans is another questionable lieutenant. He served under Grant from only July through October 1862. Rosecrans again became Grant's subordinate when Grant became general-in-chief.

Critics will disagree over the merits of Woodworth's selections for his book. There are several others who could merit inclusion. Andrew J. Smith and Eugene Carr, both of whom served as Grant's lieutenants, were the only commanders on continuous active duty from their West Point graduations until the Civil War. George W. Morgan commanded a division at Arkansas Post and resigned after a disagreement with Sherman. Although the introduction provides a brief explanation of why certain lieutenants were included, another paragraph to explain why others were not included would have been helpful.

Photographs would have been nice, but more frustrating is the lack of maps. Because many events overlap, a few maps should have been included to indicate the critical points mentioned. The reader is forced to refer to other sources to determine exactly where particular events occurred.

Book-length biographies have not been published for Charles F. Smith, James McPherson, or Peter Osterhaus; therefore, the chapters on these officers are of particular

interest to students of the Civil War. The individual authors keep their focus on the relationship between their subject and Grant's success as a general. Overall the book is well worth reading because of this narrow focus and because of the dynamics of command relationships, not only in the Civil War, but in all of America's wars.

**LTC Richard L. Kiper, *USA, Retired, Ph.D., Leavenworth, Kansas***

---

**COMBINED ARMS WARFARE IN THE TWENTIETH CENTURY,** Jonathan M. House, University Press of Kansas, Lawrence, 2001, 372 pages, $19.95.

Recent U.S. Command and General Staff College (CGSC) graduates and those who have followed the publishing efforts of the Combat Studies Institute (CSI) will be gratified to see the commercial publication of Jonathan M. House's *Combined Arms Warfare in the Twentieth Century*. Originally published as a research survey titled *Toward Combined Arms Warfare* (U.S. Army Command and General Staff College, Fort Leavenworth, Kansas, 1984), House's survey has long been one of the most comprehensive overviews of the evolution of the modern tactical battlefield.

As a CGSC text, the survey has consistently been one of the most popular of CSI's publications. As a leader in the publication of scholarly military history, the University Press of Kansas has wisely chosen to make the book available to the public. The current edition is updated, expanded, and illustrated, yet it retains the original's lucid analysis and solid research.

**LTC Scott Stephenson, *USA, Retired, Ph.D., Leavenworth, Kansas***

---

**NIGHTMARE ON IWO,** Patrick F. Caruso, Naval Institute Press, Annapolis, MD, 2001, 164 pages, $23.95.

The battle for Iwo Jima, which took place over 50 years ago, is still the battle that many believe defines today's Marine Corps. Iwo Jima is the only battle in Marine Corps history where U.S. casualties outnumbered the enemy's. There were no great or grand tactics. The fight was measured in feet and yards, with the enemy fighting from a maze of interconnecting tunnels from which he could see but not be seen.

K Company, 3d Battalion, 9th Marine Regiment, 3d Marine Division, landed with the third wave. Within one hour of their initial assault, a young 2d Lieutenant, formerly sixth on the company's chain of command, found himself thrust to the fore and required to take the responsibilities of company commander. When it was over, only 40 of the original 230 men in the company remained, 100 percent of the officers were killed or wounded, including the young lieutenant. Patrick Caruso, the author, is that Lieutenant.

Wounded on the 14th day of the battle, Caruso was evacuated to a hospital in Guam. There he realized that his mind wanted to forget what he had seen and experienced and that faces and names were becoming difficult to remember. Caruso desperately wanted to keep alive the names and actions of all those who participated, so he began writing his recollections on any paper he could find; hospital napkins, paper bags, hospital reports, or anything else on which he could write were fair game for his notes. After the war, his wife typed the notes and put them away.

In 1970, Caruso wrote an article for the *Associated Press* as a commemoration of the 25th anniversary of the battle of Iwo Jima. The response to his article was tremendous. He received so many letters and calls from the men who were there or from their families that he decided to write a book.

Caruso's story is not about tactics or military strategy; it is a story of ordinary men in extraordinary circumstances. Caruso tells what happened in a matter-of-fact style, as he saw it, as he experienced it, and as in-depth as he could. Of particular interest are the vignettes he adds throughout the book. Various chapters cover specific actions and the individuals who were key players. After Caruso tells the story in his words, he often adds the recollections of survivors who took part in the action. This literary device could be distracting, but here it works. The reader is introduced to these remarkable men in an individual, personal way.

If you are interested in tactics and strategy, this book is not for you; however, if you are interested in the thoughts and feelings of the men who fought in this incredibly costly battle, you will find *Nightmare on Iwo* fascinating and satisfying.

**LTC David G. Rathgeber, *USMC, Retired, Fallbrook, California***

---

**HEROES NEVER DIE: Warriors and Warfare in World War II,** Martin Blumenson, Cooper Square Press, NY, 2001, 641 pages, $32.00.

*Heroes Never Die: Warriors and Warfare in World War II* is a collection of 50 essays that Martin Blumenson wrote during the last 40 years. His topics range from short biographical essays to battle descriptions to leadership discussions. The book is a well-written narrative, and all the essays are relatively short.

The essays are arranged chronologically by date of publication. The problem with this is that some have similar content. Two of them, "Patton's Last Fight" and "The Death of Patton," differ only in that one includes personal letters discussing Patton's deathbed struggle. For another example, this line appears in at least three essays: "I have it," said General George S. Patton, Jr., "but I'll be damned if I can define it." Arranging the essays by theme or eliminating some that are too similar might have served better.

The book's main contribution is a collection of stories written especially for Patton fans. Almost one-fifth of the essays deals with Patton directly; another four or five mention him in passing. It seems as though Blumenson is trying to impart to the reader something about the character of very senior commanders, because he puts emphasis on senior leaders' effect on battles.

As a collection of essays on various topics, the book serves well. However, a thematic organization rather than a chronological one would probably have worked better. The book does have value for the defense community but, mostly, as a collection of stories about the military past.

**CPL David J. Schepp, *USA, Fort Benning, Georgia***

**FROM BATTLEFIELD TO BOARDROOM: Winning Management Strategies for Today's Global Business,** Dennis Laurie, Palgrave, NY, 2001, 263 pages, $24.95.

In his book, *From Battlefield to Boardroom*, Dennis Laurie asserts that "[t]he strategies of war are also the strategies of business." He proposes a formula to generate winning business strategies by using military strategic thinking. He then identifies 10 examples of military strategy translated into business strategy. Laurie's target audience includes senior business executives in positions to affect strategy and all others who wish to attain such positions.

Laurie's work is entertaining, well written, and highlights the critical importance of mission and strategy and its components. He differentiates between strategy and tactics and drives home the lesson that while tactics is important, it is not the key to success. Laurie also is careful to qualify his theory, correctly stating that strategy depends on the circumstance and that the correct strategy for one business might be exactly the wrong strategy for another. He identifies basic circumstances in which his highlighted strategies would work well.

Laurie' examples support his theory. For example, in deciding to attack an enemy's strength, he argues that a leader might consider the current situation, the enemy, and the future situation. For example, the current situation is untenable; the enemy is strong, but vulnerable; and the situation will only get worse with time. To illustrate his point, Laurie describes the Japanese attack on Pearl Harbor.

According to Laurie, the Japanese could not continue in their current situation. National pride allowed nothing less than victory. They clearly understood the potential might of the United States, but from detailed reconnaissance, they also knew that the U.S. fleet was poorly secured and rested unsuspecting at anchor. Finally, the Japanese knew that the American president was working to gain public support for war and would, given time, turn U.S. industrial power into an unstoppable juggernaut of war. Combining detailed intelligence with surprise, preparation, and leadership, Japan was able to achieve a complete victory at Pearl Harbor.

Laurie then repeats the process for the strategies of attacking weakness, internal change, concentrating forces, strategic alliances, patience, controlling choke points, relentless attack, containment, and combat readiness. His examples are effective, and his analysis is thorough.

Two areas of the book could have been improved. First, Laurie declares that the mission is "the starting point for any strategic plan." His position is that all else follows from the mission. I believe that in the military or in the business world, ultimate purpose and leader vision are the genesis for mission and strategy, which are then nested within the vision to support the purpose. Second, Laurie addresses only tactics and strategy, ignoring the operational level. Thus, in his Pearl Harbor example, he blames Japan's ultimate failure on a lack of back-up strategy. I believe, however, the attack was an operation and that Japan did not properly anticipate the consequences of its success on overarching strategy. As a result, the United States was unexpectedly galvanized for war.

Perhaps Laurie's lack of military experience led to these oversights, which do not detract from his overall message. Targeted at executives and would-be executives, the book is worthwhile for any aspiring strategymaker. Its military audience is decisionmakers above brigade. Students at the U.S. Command and General Staff College are thus a perfect military audience.

**MAJ Todd Calderwood, *USA,***
***Fort Leavenworth, Kansas***

---

**THE 92ND INFANTRY DIVISION AND THE ITALIAN CAMPAIGN IN WORLD WAR II,** Daniel K. Gibran, McFarland & Co., Jefferson, NC, 2001, 198 pages, $29.95.

When World War II began, the United States had not been engaged in war for over 75 years. However, the challenges African-American soldiers faced were just as glaring as they had been since the declaration of the Emancipation Proclamation.

Racial segregation, poor pay, and inadequate living conditions were characteristic of the "colored" troops' lifestyle during World War II. In *The 92nd Infantry Division and the Italian Campaign in World War II*, Tennessee State University Professor Daniel K. Gibran explores the role of an all-black unit as it fought in Europe.

Gibran examines the reasons behind the 92d Infantry Division's poor performance on the battlefield—low morale because of racial segregation, limited facilities, and lack of trust in white leadership. His book tells the story of Major General Ned Almond, a white commander who was vilified as a racist and perceived as a poor military strategist by black soldiers. Other anecdotal stories include those of Vernon Baker and John Fox who emerged as leaders but endured a long struggle for recognition.

Gibran concludes the book by detailing his investigation of why no African-Americans received the Medal of Honor during World War II. Gibran's book, which is well written and smartly compartmentalized, is at once a chronological history of an all-black unit in World War II struggling to gain the respect of the Nation and a tribute to every black soldier who has served the country since its inception.

**LTC Dominic J. Caraccilo, *USA,***
***Vincenza, Italy***

---

**DARK AND BLOODY GROUND: The Battle of Mansfield and the Forgotten Civil War in Louisiana,** Thomas Ayres, Taylor Trade Publishing, Dallas, TX, 2001, 273 pages, $24.95.

Thomas Ayres, in his latest history, *Dark and Bloody Ground: The Battle of Mansfield and the Forgotten Civil War in Louisiana*, talks from a Southern perspective that is somewhat subjective, but highly readable. The hero of the story is Confederate General Richard Taylor, son of President Zachary Taylor.

One problem with Ayres' book is his extensive use of subjective sources although he does rely heavily on Taylor's memoirs. However, Taylor was prone to embellish

his tale. Also, Ayres' attention to detail is sometimes suspect. For example, he relates that the Confederates surrendered "Fort Donaldson" in Tennessee "on high ground overlooking the Cumberland River near it[s] junction with the Mississippi." The correct spelling is "Donelson," and the Cumberland River does not form a junction with the Mississippi River, but with the Ohio River. These small details are not important to Ayres' story, but it makes the reader wonder if Ayres got other details wrong. Finally, the book suffers from a lack of footnotes and good maps of the Louisiana theater. Overall, however, this book is entertaining and tells of a little-known theater of the American Civil War.

**LTC D. Jon White,** ***USA,***
***Fort Leavenworth, Kansas***

---

**THE WAR OF INDEPENDENCE: The British Army in North America, 1775-1783,** John Fortescue, Stackpole Books, Mechanicsburg, PA, 2001, 263 pages, $34.95.

*The War of Independence: The British Army in North America, 1775-1783,* by John Fortescue, is a substantial step toward understanding the Revolutionary War, and the work shows the strengths and weaknesses of all parties to the war. Congress and Parliament are the only elements cast in a uniformly negative light for showing a self-serving lack of support to their respective militaries. Of the relevant parties, only General George Washington's party receives uniformly favorable coverage.

Fortescue shows an astonishing command of 18th-century tactics and the battles of the Revolutionary War, major and minor. Of great value to the scholar and casual reader is Fortescue's analysis of why American Colonists won and why Great Britain lost. Great Britain was in a world war with colonies covering half the world and was at the same time enemy with half of Europe.

Patriot militias are credited with part of the Colonists' success. Militias could hold the Colonists' rear areas and control loyalists, and every time British patrols went inland for firewood or strategic advantage, the local people shot at them. Plagued by organized militias, guerrilla bands, and disgruntled individuals, the British could go anywhere, but hold nowhere.

**Kevin L. Jamison,** ***Attorney at Law,***
***Gladstone, Missouri***

---

**MACARTHUR AND DEFEAT IN THE PHILIPPINES,** Richard Connaughton, The Overlook Press, Woodstock, NY, 2001, 394 pages, $35.00.

More than a generation after he died, General Douglas MacArthur still generates interest and controversy. In *MacArthur and Defeat in the Philippines,* Richard Connaughton, a retired British officer who has written about the Battle of Manila and the Russo-Japanese War, concentrates on MacArthur's first Philippine campaign.

To place the campaign in context, Connaughton examines U.S. military policy in the Philippines through 1942, especially MacArthur's attempt to construct a Philippine army after 1935 and the subsequent failure of the Philippine army in battle. However, Connaughton does not understand the U.S. military planning process or provide enough of the 1941 political-diplomatic context to make MacArthur's statements and actions completely intelligible. MacArthur's idea of creating a citizen army had merit, but the Commonwealth government did not have the fiscal wherewithal or the political will to make it a reality. The U.S. military's long-term pessimism about the feasibility of defending the Philippines as well as MacArthur's tendency to make rash promises he could not fulfill complicated the situation.

Connaughton dissects MacArthur's character and examines how it affected his decisions when faced by military dilemmas; a lack of money and equipment; and general unpreparedness multiplied by the difficult Filipino geography. MacArthur's command received infusions of equipment and personnel despite President Franklin D. Roosevelt's Administration's desire to concentrate its military and diplomatic efforts in the Western Hemisphere and Europe. Connaughton, however, does not explain the situation Army planners faced in midsummer 1941 and the political reasons for reinforcing the Philippines.

Most of the relevant documents that dealt with MacArthur's failure to launch a counterstrike after receiving the news of Pearl Harbor and his culpability for the destruction of most of the Air Force on the ground are missing. Connaughton, left to sort out contradictory personal accounts, concludes that such documentation did not survive. Either they were destroyed in the defeat, or MacArthur's wartime headquarters had no interest in fixing responsibility for the fiasco.

Connaughton also criticizes MacArthur's overall handling of the campaign and finds MacArthur's self-delusion and persuasive "nonsense" to be dominant at that time. While ingenious, MacArthur's forward strategy was flawed because it did not reflect the military realities he faced. Instead, his strategy was dictated by local political realities, belief in the war-winning abilities of the heavy bomber, and a dismissal of Japanese military capabilities.

The communiqués MacArthur sent to Washington, D.C., reflected wishful thinking rather than the actual military situation subordinates reported to him. His romantic predilection to pose as a warrior-general resulted in a logistical nightmare that gave the invading Japanese an advantage they should not have had. If the Filipino-American Army had been led with greater imagination, flair, foresight, and planning, an entirely different set of possibilities might have arisen. The actions of the Philippine Scouts showed the potential of Filipino soldiers. It might be argued that a general who had greater talents and abilities as a troop trainer than those MacArthur possessed might have done a better job. But, MacArthur's genius lay in the fact that he had instinctively mastered the politics of war and the art of political spin better than any other military figure. Connaughton's judgment is harsh but just: he finds that MacArthur's moral courage did not match his unquestioned physical courage.

MacArthur relied on his loyal staff to filter ideas and create orders based on his vague notions. Throughout World War II and Korea, MacArthur had the benefit of

splendid field commanders who could plan and execute operations beyond the abilities of his personal staff.

Nevertheless, Connaughton concludes that MacArthur cannot be held entirely responsible for the Philippine debacle. The Philippines Islands were lost because of the Japanese pre-emptive strike at Pearl Harbor and their destruction of the Far Eastern Air Force. Ultimately, the United States did not have enough equipment and trained men to save the islands. I find this conclusion questionable because as the commander, MacArthur carried the ultimate responsibility for victory or defeat; his main task was to win the campaign, and he failed.

Despite his failings, MacArthur's rhetorical gifts, political prominence, and America's need for a hero combined to keep him in command throughout the Pacific War. I recommend this book as a case study in leadership and as a study of military realities versus political desires.

**Lewis Bernstein, *Ph.D.,***
***Huntsville, Alabama***

---

**CIVIL WAR: Acoustic Shadows**, Charles D. Ross, White Mane Books, Shippensburg, PA, 2001, 174 pages, $24.95.

In *Civil War: Acoustic Shadows*, Charles D. Ross explains how the scientific occurrence called "acoustic shadow" affected the critical decisions of commanders during seven Civil War battles. Several Civil War reports mention acoustic shadow, which Mark Boatner, in *The Civil War Dictionary* (David McKay Company, Inc., New York, 1980), defines as "a phenomenon that results in sound being inaudible to persons a short distance from the source while the same sound may be heard over a hundred miles away. . . ." As Ross demonstrates through terrain and weather analysis and the use of official reports, such a phenomenon did occur several times during the Civil War.

In an era when battlefield telegraphy was impractical, sound was the primary means by which commanders grasped what was happening on the battlefield. Were that sound masked or absorbed by hills, vegetation, wind, or atmosphere, what an individual standing in a particular location hears could be severely affected. On the battlefield such effects could be disastrous.

While Ross presents a clear picture of the effects of acoustic shadow on the battles he analyzes, his explanation of why the phenomenon occurs is not as clear as he intends. His attempt to simplify the explanation of the complexity of sound is commendable, but his explanations of such principles as rarefaction (movement of molecules) and the effect of temperature on refraction remain rather difficult to follow.

Peripherally, Ross mentions that several commanders did not actively seek information when something appeared amiss nor did they alert their senior commanders when they engaged in battle. The reasons why they did not keep their superiors informed should have received more attention than Ross gives. Although Ross did not mean for *Acoustic Shadows* to be a detailed battle or leadership study, he should have taken to task commanders who, despite not hearing a battle, should have known one was taking place.

As Ross explains, acoustic shadow is caused by specific conditions. He could have aided the reader by explaining why, under similar conditions, the effect did not occur. For example, Chancellorsville was fought in May 1863. The battle of the Wilderness occurred in almost the exact location one year later. Why was there no acoustic shadow in the second battle?

Better maps would have helped readers understand how terrain could produce or affect acoustic shadow. Ross uses several maps from *Battles and Leaders of the Civil War*, edited by Robert Underwood Johnson and Clarence Clough Buel, (Harrisburg, PA: Archive Society, 1991) that, because of the extensive detail, make it difficult for the reader to follow along with the narrative.

Overall this is an interesting book. Acoustic shadow is known to Civil War historians and students of particular battles, but it has not been previously examined in its entirety. Certainly Ross has provided an excellent starting point for an understanding of this scientific phenomenon.

**LTC Richard L. Kiper, *USA Retired,***
***Ph.D., Leavenworth, Kansas***

---

**MAKING WAR, THINKING HISTORY: Munich, Vietnam and Presidential Uses of Force from Korea to Kosovo,** Jeffrey Record, Naval Institute Press, Annapolis, MD, 2002, 216 pages, $28.95.

Every U.S. president who has agonized over the application of force when making the final decision to go to war relies on history, precedent, and personal experience to help him reach the ultimate decision to send U.S. Armed Forces into harm's way.

*Making War, Thinking History: Munich, Vietnam and Presidential Uses of Force from Korea to Kosovo* by Jeffrey Record delves into the lives of seven U.S. presidents and their decisions to commit forces in Korea, Vietnam, the Persian Gulf, and other 20th-century conflicts. Record, a professor of strategy and international security at the U.S. Air Force Air War College, Montgomery, Alabama, has been a staff adviser on national security affairs for two senators and served as a staff member of the Senate Armed Services Committee.

The 1938 Munich Agreement that sought to appease German Fuhrer Adolph Hitler has shaped the decision to go to war of every U.S. president from Harry S. Truman to William Clinton. Truman saw North Korean forces assaulting South Korea in 1950 as the first test of the United Nations (UN). Truman reasoned that if the United States did not respond to the North Korean invasion of South Korea, then the UN would dissolve.

Dwight D. Eisenhower saw similar threats in Indochina and believed that the Munich Agreement applied to the Soviets. Record argues that this belief blinded Eisenhower and kept him from seeing Vietnam for what it was—a colonial struggle. America, fearing the domino effect that communism posed to Asia, supported the 1954 Geneva Conference decision that led to the withdrawal of French forces from Indochina. Vietnam was divided into North Vietnam and South

Vietnam, and a reunification election was mandated to be held in one year. Subsequently, South Vietnam, with the support of its Western allies refused to hold elections, fearing that Ho Chi Minh would win.

Probably no U.S. president understood the lessons learned from trying to appease Hitler better than did John F. Kennedy. During Kennedy's administration the Department of Defense adopted the concept of "flexible response," the ability to deal with communist aggression at the nuclear, conventional, and insurgent levels. Vietnam offered the first opportunity to test this policy.

Ho Chi Minh was no Hitler. While Hitler had desired total dominion over Europe, Ho Chi Minh wanted to reunify Vietnam, which did not pose any shift in power between noncommunist Asian allies.

Record also touches on the presidential decisions of Richard M. Nixon, George H.W. Bush, and William Clinton, all of whom had to weigh the risks and advantages of ending or beginning wars. Record's is an excellent book for those interested in strategic-level military history and presidential decisionmaking.

**LCDR Youssef H. Aboul-Enein,**
***USN, Gaithersburg, Maryland***

---

**MILITARY JUSTICE IN AMERICA: The U. S. Court of Appeals for the Armed Forces, 1775-1980,** Jonathan Lurie, University Press of Kansas, Lawrence, 2001, 400 pages, $25.00.

How do we learn about the U.S. military justice system? A few learn about it when they face the dishonor of their trial by court-martial. And, some learn about it because they have the honor of sitting on a case as a court-martial member.

One of the best ways for historians, lawyers, military buffs, and military members to learn about military justice is by reading Jonathan Lurie's *Military Justice in America,* which takes an in-depth look at the history and development of the U.S. military justice system. While Lurie focuses on the Court of Appeals for the U.S. Armed Forces, he provides important background information about the court, the military justice system, and the Uniform Code of Military Justice (UCMJ), which recently celebrated its 50th anniversary. Lurie puts this anniversary in context. He shows the long, hard, political, and often personal battles that created the UCMJ and the court.

Lurie highlights key cases and events in U.S. military justice history, such as Andrew Jackson's New Orleans trial; the hanging of Secretary of the War John Canfield Spencer's son after a court-martial on the Navy brig *Somers;* and the military justice system during the Civil War. Lurie provides the most details when explaining the reform movements that occurred around World War I and after World War II. During World War II there were over 1,700,000 courts-martial. The vast number of cases and the subsequent vast number of prisoners prompted reforms in military justice that led to the UCMJ. This well-written book will appeal to any person interested in military justice or American history.

**Major Herman Reinhold, *USAF,***
***Yokota Air Base, Japan***

---

**EISENHOWER AND CHURCHILL: The Partnership that Saved the World,** James C. Humes, Prima Publishers, Roseville, CA, 2001, 256 pages, $24.95.

*Eisenhower and Churchill: The Partnership that Saved the World,* by James C. Humes, fails to show a partnership, and it fails to show how Dwight D. Eisenhower and Winston Churchill saved the world. The book is nothing more than a mediocre dual biography. Humes alternates from a chapter on Churchill to a chapter on Eisenhower, back to a chapter on Churchill, until the time in history when their paths finally crossed. After their historic 1941 meeting, their respective leadership responsibilities kept them from spending much time together. Once the war ended, they met only occasionally.

The book contains few chapters that deal with Churchill and Eisenhower together, so the book is not really about their partnership at all; it is two near-hagiographies stitched together by a marginally adequate attempt to show that the two men shared similar backgrounds and upbringings. But that does not work. Only by generalizing the commonalties to the point of meaninglessness can one successfully draw a parallel between being the son of a powerful, successful English politician and the son of a middle-class, mid-western American father. Equally shaky is Humes' attempt to equate Churchill's absent parents with Eisenhower's disciplinarian father.

There is a strong qualitative difference between Churchill's political success and subsequent collapse during World War I and Eisenhower's inability to obtain an overseas post. That both men attended military academies is meaningless, as is the coincidence that both had children who died the same year. Such links are weak, and it appears that Hume stresses such coincidences to prove a conclusion about his heroes despite the fact that hard evidence does not support his position. In these lives, there is as much difference as there is similarity.

Although the book's press release cites new research, the book lacks documentation. It has a three-page bibliography and cites a number of secondary sources, including only two oral history transcripts.

Overall the work disappoints; it uses forced connections to shore up its incomplete biographies. The title exaggerates; if the book is to justify its claim that Churchill and Eisenhower were the key players in winning the war, then it needs to show how they worked together to accomplish this feat.

**John H. Barnhill, *Ph.D.,***
***Tinker Air Force Base, Oklahoma***

---

**AFTERNOON OF THE RISING SUN: The Battle of Leyte Gulf,** Kenneth I. Friedman, Presidio Press, Novato, CA, 2001, 414 pages, $29.95.

Finding a book about a single battle of World War II where the battle is not the one that "turned the tide" for the allies is difficult. In *Afternoon of the Rising Sun: The Battle of Leyte Gulf,* author Kenneth I. Friedman does not claim that the battle for Leyte Gulf was the battle that turned the tide. To him, the battle was the battle that crushed the power of the Japanese Fleet.

The battle of Leyte Gulf was, in truth, the final Japanese battle for the Philippines. General Douglas MacArthur was about to keep his

promise and return. The Japanese knew that if MacArthur was successful, he would be able to cut them off from the raw materials and supplies they desperately needed from Southeast Asia and the South Pacific.

The Japanese problem was exacerbated by a lack of ground and air forces to stop MacArthur. Japanese planners decided that their best hope was to attack the landing force with the still formidable Japanese combined fleet while MacArthur's force was most vulnerable. However, the Japanese knew this would not be easy since the landing force, headed by Admiral Thomas C. Kinkaid, included the U.S. 7th Fleet composed of over 700 ships. Also, Admiral William F. Halsey and the 3d Fleet, with more than 1,000 planes on aircraft carriers and 79 other ships, including 6 new Iowa-class battleships, deployed to help defend the 7th Fleet and the approaches to the Leyte Gulf. The only hope for the Japanese was to somehow lure the 3d Fleet away from the battle, destroy the 7th Fleet, and isolate any of the force that had made it to shore.

To do this, the Japanese sent a deception force, including all four of their remaining battleships, to entice Halsey away from the Philippines, a ruse they thought might succeed given Halsey's reputation for impulsiveness. Meanwhile, the balance of the Japanese combined fleet, including the super-battleships *Yamato* and *Musashi* were to sortie to the Leyte Gulf from a different direction and destroy the 7th Fleet and the landing force. The plan was bold, daring, and desperate, and it almost worked.

Halsey did indeed take the bait and left the approaches to Leyte Gulf undefended. Worse, he did so against his superior's direct orders although in his defense, the wording of his orders was sufficiently vague. Also, the lack of a unified command structure in the area did not help matters. For example, Kinkaid did not even know that the approaches were left open, and thus, he was completely caught by surprise. Kinkaid erroneously believed that before Halsey had left with his aircraft carriers, he had built a task force around the 3d Fleet battleships and left it behind. Messages that needed to be delivered instantly took hours because of the requirement for them to go through two separate command structures before being delivered. Only the dedicated and decisive actions of Rear Admiral Clifton Sprague, the amazing heroism of his ship's crew and officers, and favorable weather prevented disaster for the United States.

The Japanese had major problems executing their plan. Japan's command structure was even more complex and less unified than the Allies' and all but eliminated coordination and timing of their complex plan. Japanese commanders' decisions were sometimes difficult to explain, unless one accepts the theory that from the beginning of planning, some commanders never believed in the potential for success.

The Battle of Leyte Gulf deserves careful study by military officers of all branches of service. The battle is a fascinating study of strategy, tactics, impact of commanders on battles, small-unit leadership, unity of command, and combined arms warfare. The battle was the last time that the U.S. Navy conducted classic naval maneuver crossing the T.

*Afternoon of the Rising Sun: The Battle of Leyte Gulf* presents a clear, well-researched, comprehensive look at the battle, its intricacies, and its importance. The book is fascinating and thoroughly enjoyable. Friedman's work deserves a time-honored place in every military student's library.

**LTC David G. Rathgeber, *USMC, Retired, Fallbrook, California***

---

**THRICE CAUGHT: An American Army POW's 900 Days Under Axis Guns,** Odell Myers, McFarland & Company, Jefferson, NC, 2002, 164 pages, $29.95.

*Thrice Caught: An American Army POW'S 900 Days Under Axis Guns* is the interesting story of Army Air Force 2d Lieutenant Odell Myers, who was shot down on his fourth mission over Tunisia, captured by the Germans, and held in an Italian prisoner of war (POW) camp until Italy surrendered to the Allies. Myers was then transported to Germany, where he spent another 3 years. Along the way, he escaped twice, only to be recaptured and returned to captivity.

As interesting as the story is, this small paperback adds little to the body of World War II POW literature. One interesting bit of trivia is that one of Myers' fellow prisoners, David Westheimer, wrote *Von Ryan's Express* (Doubleday, New York, 1964) and based it on a fictional escape from the same camp.

**COL John Messer, *USAR, Retired, Ludington, Michigan***

---

**MOLTKE AND THE GERMAN WARS, 1864-1871**, Arden Bucholz, Palgrave Publishers, NY, 2001, 240 pages, $21.95.

What do modern militaries owe to old Prussia? According to Arden Bucholz, quite a bit. However, the unhappy memories associated with two world wars have warped our view of 19th-century Prussia and its remarkable army. Our associations tend to make the Prussian army a mythological demon. Bucholz writes that only when one gets past 20th-century images of storm troopers, Nuremburg rallies, and *Stukas* can a modern reader fairly appreciate the Prussian army's pioneering development of modern concepts of war planning, staff organization, and operational command and control, not to mention its extraordinary battlefield performance.

Bucholz, a history professor at the State University of New York, Brockport, is well qualified to reframe our view of the Prussians. He has written extensively on German military history. To offer a fresh interpretation of the three Wars of German Unification, he layers his own research for *Moltke and the German Wars, 1864-1871,* on that of Gordon Craig, Michael Howard, and the eyewitness accounts of Theodor Fontane. Using concepts taken from 21st-century information and organization theory, Bucholz offers an original analysis to create a synthetic history that reemphasizes the debt that modern armies owe to the Prussians.

The connecting thread throughout *Moltke and the German Wars,* is the role of a most extraordinary man, Helmuth von Moltke, of whom

Bucholz writes, "He is one of the first of a new breed: the modern, self-made, technically educated, professional officer." More than anything else, Bucholz's book is a biography, but it is military biography superimposed on the history of a warfighting institution—the Prussian army—and on narrative accounts of Prussia's wars with Denmark (1864), Austria (1866), and France (1870-1871). And, it is as a biography that this book works best, as Bucholz convinces us that Von Moltke's role in creating modern military processes has been undervalued.

Brought up in an environment that immersed him in the world of ideas, Von Moltke entered a Prussian army that Gerhard von Scharnhorst and others had turned into a true learning organization. Von Moltke's broad education and indomitable self-discipline, coupled with the unique lessons he drew from serving with the Ottoman Turks, earned him the role of adviser to Prince Frederick Charles. The royal family recognized Von Moltke's talents, and after Prussia had botched the initial phases of the war with Denmark, Von Moltke's role as Chief of the General Staff was transformed from relative insignificance to battlefield command of the Prussian army. From this position, he led Prussia to victory after victory.

The key to these victories was the intellectual process that Von Moltke applied to the problem of preparing for war and his rigorous analysis of past failures while introducing the concepts of risk management to war planning. By emphasizing worst-case scenarios in developing his plans, he built a margin for error that grew steadily with every enemy mistake. Von Moltke's plans were tested by endless war games and staff exercises, and by the time a conflict began, he had already envisioned the general course of the upcoming operation. His mind and method enabled him to look far beyond the time horizon of his less adaptive opponents.

Overall, Bucholz' combination of military biography, organizational description, and battle narrative works well. His narrative is strongest when dealing with Von Moltke's generalship and the Prussian system. He suggests no criticisms of Von Moltke's personality and generalship, yet he convinces the reader that this is no hagiography.

Unfortunately, Bucholz's editor did a poor job, especially in the campaign chapters. The chapter on the Danish War, for example, is barely readable, suffering from sentence fragments, uncertain pronoun references, and irrelevant trivia. Also disappointing is a scarcity of maps. The editing lapses are genuinely distressing because they detract from an otherwise superb book. Still, the book earns a hearty recommendation. One hopes that future editions will be revised to bring all chapters up to a uniform standard of excellence.

**LTC Scott Stephenson, *USA, Retired, Ph.D., Leavenworth, Kansas***

---

**FOUR YEARS WITH THE IRON BRIGADE: The Civil War Journal of William Ray,** Lance Herdegen and Sherry Murphy, eds., Da Capo Press, New York, 2002, 446 pages, $27.50.

Much had been written about the Union Iron Brigade's exploits during the American Civil War. The Iron Brigade, which participated in nearly every major engagement in the East, endured incredible casualties. Only a few returned to their homes in Wisconsin, Michigan, and Indiana. Sergeant William Ray was one of that lucky few. *Four Years with the Iron Brigade: The Civil War Journal of William Ray* chronicles Ray's personal story. Editor Sherry Murphy, Ray's great-great granddaughter, and co-editor Lance Heredegan capture the essence of a common Civil War soldier's life—in thought and deed.

Ray joined the Seventh Wisconsin Volunteer Infantry in 1861 as a private and served with the unit until being mustered out in 1865 with the rank of sergeant. His account of his experiences as a common soldier are riveting, and they magnificently capture the monotony of endless drilling, guard duty, and camp chores that consumed most of his days. He also captures the terror of sudden, deadly combat. Ray received serious wounds at Gainesville, Gettysburg, and the Wilderness. His wounds may have saved his life; he was hospitalized during the deadly engagements at Antietam and Second Bull Run.

The editors leave Ray's words as he wrote them; they bring to life the jargon, mannerisms, and linguistic habits of the time. Ray describes camp life, the toil of survival, the laziness of his tentmates, and guard duty in the rain. His accounts of casualty evacuation and medical treatment offer rare insight into the era's conditions.

*Four Years with the Iron Brigade* is a soldier's story, and at the same time, it is a priceless window into America's past. We are lucky that Ray recorded his story. We are even luckier that his words survived. His is a great book, and I recommend it for students and historians alike.

**MAJ Ted Behncke, Sr., *USA, Fort Leavenworth, Kansas***

---

**STALIN AND THE SOVIET-FINNISH WAR, 1939-1940,** Alexander O. Chubaryan and Harold Shuklman, eds., Frank Cass, London. Distributed by ISBS, Portland OR, 2002, 301 pages, $80.00.

Before the Germans invaded the Soviet Union in 1941, the Soviets fought a war with the Finns that lasted from the winter of 1939 to the spring of 1940. The war, called the Winter War by the Finns, was on the whole unsuccessful for the Soviets in relation to the aims they espoused before its outset. The Soviet's goal was the annexation of the majority of Finland, predicated on Stalin's belief in the need for a *cordon sanitaire*. At the conclusion of the war, however, only a section of the Karelian Isthmus had been successfully negotiated by treaty.

*Stalin and the Soviet-Finnish War, 1939-1940,* is a transcription of a series of after-action meetings held in Moscow in April 1940 and attended by most of the major commanders involved in the war. The book includes a short introduction to the Soviet-Finnish War, the after-action meeting transcriptions, a list of the participants with short biographies, and a few relevant maps. It illustrates how much a truly open forum can affect a country's military affairs. Despite the Soviet Union's reputation for oppression and repres-

sion, the meetings seemed to be remarkably open to the honest views of the participants.

With some understanding of the conflict, it is possible to extrapolate much from what various Soviet commanders learned from their mistakes, especially in the area of artillery. One of the book's high points is Stalin's closing remarks in which he describes some of the troubles he had as a political commissar during the civil war that occurred about 20 years earlier. It makes one wonder how much of the speech is true and how much is false, based on Stalin's tendency toward revisionism of his revolutionary biography.

Overall, the book is remarkably interesting to read. It is intriguing to read a book that just a little over 10 years ago would not have been available to readers in the West.

**SPC David J. Schepp, *USA,***
***Fort Benning, Georgia***

---

**CLASH OF ARMS: How the Allies Won in Normandy,** Russell A. Hart, Lynne Rinner Publishers, Boulder, CO, 2001, 469 pages, $79.95.

In *Clash of Arms: How the Allies Won in Normandy,* Russell A. Hart has captured, through intense research, the correlation between U.S., Canada, Great Britain, and German armies during World War II. He meticulously dissects each army into several categories of preparedness and execution, including an analysis of each army's World War I doctrine and how each failed to transition its doctrine to fit the conditions of World War II. Hart also discusses political trends and military institutional hierarchy and what effect these hierarchies had on each country.

Hart builds compelling arguments about each country's strengths and weaknesses during the interwar years. He is particularly harsh on Britain, stating how inflexible and unwilling it was to change its army's hierarchy, and he stresses that politics was the overriding factor that led to the neglect of Canadian forces. He praises the United States and Germany for their continued development during the interwar years. Finally, he tells how isolation and a lack of resources affected doctrinal thought and force development of the United States.

Hart uses the battle of Normandy as a testbed for determining if the armies were successful during the interwar years, adjusting his theory as he canvasses the experiences of each army as it entered the Normandy conflict. Of particular interest is his analyses of the general officers and how they adapted and evolved their approaches to warfare. Hart draws correlations between training and doctrinal development during the execution phase of the operations in Normandy, and lists pros and cons of how each army conducted itself.

Some of the lessons learned from each army were the same; however, tactics, techniques, and procedures varied drastically for each. One lesson that Hart stresses, both in the interwar period and during the war, was the ability of each army to gain intelligence. How each army developed its doctrinal approach and how it revised its approach during the war was of particular interest.

Hart suggests that it is critical for armies to have the capability to fight for information to maintain contact within their forces to develop tactical situations. All the armies learned hard lessons, and each developed its forces and doctrines to meet the varied challenges.

I recommend this book because of Hart's superb research and historical insight. The bibliography alone is a priceless wealth of information for anyone doing historical research.

**LTC Billy J. Hadfield, *USA,***
***Beavercreek, Ohio***

---

**INDONESIA'S TRANSFORMATION AND THE STABILITY OF SOUTHEAST ASIA,** Angel M. Rabasa, Peter Chalk, RAND Corporation, Santa Monica, CA, 2001, 100 pages, $15.00.

*Indonesia's Transformation and the Stability of Southeast Asia* is a report the RAND Corporation prepared for the U.S. Air Force to assess the rapid changes occurring in Indonesia and to recommend policies to the U.S. Government and the Air Force in response. The book is an excellent introduction to the complex situation that followed the end of the Suharto regime. Although its depth of coverage is rather limited by its length, it includes numerous footnotes and an extensive bibliography, which covers five pages and includes numerous academic papers, periodical articles, and reports from international conferences. Sources come not only from the Western world but also from Indonesia itself. This breadth of coverage improves the quality of Angel Rabasa's and Peter Chalk's summary and provides a valuable source for anyone seeking to further investigate the subject.

The report begins with a succinct summary of the situation in Indonesia through 2001 and includes the growing pains of the post-Suharto political system; the conflict and United Nations intervention in East Timor; and the separatist pressures in several provinces. This summary also provides several recommendations that focus on improving the country's stability and regional influence and U.S. Air Force policies toward Indonesia. The summary concludes with a caveat recommending that the Air Force continue to prepare for the worst-case scenario of complete Indonesian collapse. The remainder of the report elaborates on the points that the initial summary contains.

The publication also includes chapters detailing Indonesia's regional significance; its recent and future challenges; and opportunities for U.S. influence. Each chapter effectively presents its subject matter and is well documented, allowing the report to serve as a useful introductory publication to the region and a guide to further research.

The only real criticism one might level against the report is its tone. In an attempt to achieve currency and relevance in 2001, Rabasa and Chalk chose to write in a journalistic style, which makes the piece read much like a long article in a current periodical. While this approach might have been effective in 2001, today it reads like old news. Despite this shortcoming, the authors effectively summarize a complex situation in a relatively short space. Therefore this report remains of value to the military professional as an introduction to the region and as a comprehensive bibliography.

**LCDR Kyle B. Beckman, *USN,***
***Fort Leavenworth, Kansas***

**HAPPINESS IS NOT MY COMPANION: The Life of General G.K. Warren**, David M. Jordan, Indiana University Press, Bloomington, 2001, 401 pages, $35.00.

General Gouverneur K. Warren, a regimental, brigade, and corps commander as well as a chief engineer of the Army of the Potomac, is a tragic figure of the American Civil War. He is best remembered for two main incidents. In the first, on his own authority, he ordered Colonel Strong Vincent's brigade to an unoccupied Little Round Top just before Confederate Lieutenant General James Longsteet's attack on 2 July. In the second, he was relieved of command, 8 days before the end of the Civil War for his lack of promptness and diligence in the battle of Five Forks.

Warren's military career is a case study in the relationship between command responsibility and the authority to relieve subordinates. Warren was a democrat and a McClellanman and possessed some of that officer's undesirable penchant for ponderously slow movements. Warren also shared General George McClellan's abhorrence for attacking fixed fortifications. This is all the more unfortunate since Warren's rise to corps command coincided with the point in the war at which field fortifications became a de rigueur component of the war in the east. Warren's caution put him in an even less favorable light when General Ulysses S. Grant brought his aggressive style of fighting to the eastern theater in 1864.

Warren considered his proudest moments to be his refusal to follow orders to assault the Confederate field fortifications at Mine Run in 1863; his ambush of Confederate Lieutenant General A.P. Hill's corps at Bristoe Station; and his refusal to arrest the Mississippi State legislature for their crime of trying to meet during Reconstruction.

David M. Jordan's telling of Warren's story is smooth and passionate, sometimes too passionate, such as when he described Union Lieutenant General Philip Sheridan as having a "pitchfork and a forked tail." Residents of the Shenandoah Valley of Virginia in 1864 might have agreed with this assessment, but it is a little too passionate for a biography written more than a century after the event.

Jordan does not mention any alternatives to the traditional story of Warren on Little Round Top. After the war, members of the Signal Corps said that they had difficulty convincing Warren that Confederate troops were about to assault Little Round Top, an action for which Warren has been given great credit.

Overall, this biography is thorough and informative. Jordan tells the story of a Union officer who did great work for the Union cause, and who was, perhaps unjustly relieved after his greatest triumph.

**LTC D. Jon White,** ***USA, Fort Leavenworth, Kansas***

---

**FORT UNION AND THE UPPER MISSOURI FUR TRADE,** Barton H. Barbour, University of Oklahoma Press, Norman, 2001, 304 pages, $34.95.

Barton H. Barbour creates a vibrant portrait of Fort Union, the earliest American trading post on the upper Missouri. The fort, which was active from 1829 to 1869, is now in western North Dakota. Barbour recounts the techniques that went into the fort's construction and the people it served. He describes the various demographic groups in the area: the Indians, the artists, the traders, the trappers, the clerks, and the soldiers. Barbour also outlines American Indian policies during the period leading to the plains Indians wars.

While called a fort, Fort Union only occasionally served soldiers; mostly it served private enterprise, and served it well. Despite small trading companies looking for short-term profits, the dominate company, the American Fur Company, had a vested interest in leaving the Indians to hunt as they pleased, and treating them fairly, finding them canny traders.

Barbour details the laws that Fort Union's residents lived by, those that attempted to govern the Indian trade, and those with which the residents chose to govern themselves. Despite being on the frontier, the fort was safer than many eastern cities. The balance of terror between the walking arsenals, who populated the fort, and the need for mutual cooperation worked against Hollywood frontier violence. Only twice in four decades were area residents "outlawed" by the community in the Old English sense. This status was essentially an open contract on their lives, a contract satisfied by sending them out of the country. Rich historical detail makes this book a valuable asset for scholars of the frontier and of Indian history.

**Kevin L. Jamison,** ***Attorney at Law, Gladstone, Missouri***

---

**CHINA SINCE TIANANMEN: The Politics of Transition,** Joseph Fewsmith, Cambridge University Press, New York, 2001, 320 pages, $26.95.

Joseph Fewsmith, a historian who began his scholarly career by investigating the attempts of Shanghai commercial and political elites to create a civil society between 1890 and 1930, eschews predicting apocalyptic change. Instead, he shows readers how social and economic changes since 1989 have affected political and intellectual scenes. Because of his broad knowledge of Chinese history, Fewsmith is not stampeded to radical conclusions. This book is a continuation of his investigation of the socio-political relationships among China's elites since the 1890s.

*China Since Tiananmen: The Politics of Transition* is organized in three parts: the unsuccessful post-1989 attack on Deng Xiaoping's reform program; the simultaneous changing definition of reform and rebirth of popular nationalism; and the interactions of elite power struggles with popular nationalism. Fewsmith concludes with an assessment of China's changing relationship with the world.

Fewsmith feels that the key to understanding the shape of contemporary Chinese politics and society lies in the contemporary intellectual critique of the enlightenment tradition, the foundation of liberal intellectual thought since the May Fourth Movement of 1919. He uses this appraisal to explain the rise of popular and elite nationalism as well as Chinese neoconservatism since 1989. He also examines elite politics and the ways factional alliances have changed in this same period to show how Chinese political conduct has changed. When both of these analytic streams join, the reader gets a coherent assessment of the socio-

political forces that drive contemporary Chinese politics.

Fewsmith's analysis shows that those who expected rapid economic and political reform in the 1980s and 1990s were bound to be disappointed, just like those who expected rapid political change in the aftermath of the Tiananmen incident were disappointed. He explains that the reasons for these disappointments lie in the nature of Chinese politics, with its deep-rooted tradition of factional elite competition and strife, a divided intellectual community, and volatile popular sentiments. Using a variety of Chinese language materials, Fewsmith shows how Jiang Zemin's government is under siege by social forces it cannot control, like the accelerating erosion of Chinese Communist values and ideals as well as the rise of popular nationalism.

Fewsmith also lays bare the intellectual debates that have moved beyond the academy, partially marginalizing intellectuals. As Chinese society is liberalized by market reform and freed from the constraints that the communists placed on it, a new debate about fundamentals is taking place that goes far beyond the debate started by May Fourth Movement intellectuals. Questions being raised include, "Must all societies follow the liberal-capitalist model to democracy and liberal economics?" And, "Are there values beyond moneymaking worth preserving, or should everything be evaluated on a profit and loss basis?" Although others have previously posed these questions, they are now being discussed with new urgency. The questioning goes beyond traditional Chinese or Marxist analytic categories and is informed by the Western currents of postmodernism, neo-authoritarianism, nationalism, and liberalism.

By focusing on these questions, Fewsmith takes us inside the debates between policy-oriented intellectuals and the maneuvering of the top leadership. He cautions us to remember that social liberalization is not being replicated in the political culture.

Fewsmith shows that while the demonstrators in Tiananmen Square were more outward-looking than those in power, the exact opposite is true today; the government is more outward-looking than are its critics. He goes to the root of contemporary Chinese politics to give the reader a coherent, credible narrative of fundamental political conflict. I recommend the book to all those with a professional interest in China and for those who want to understand the depths of its contemporary political struggle.

**Lewis Bernstein, *Ph.D.*,**
***Huntsville, Alabama***

---

**KILLING PABLO: The Hunt for the World's Greatest Outlaw**, Mark Bowden, Atlantic Monthly Press, New York, 2001, 400 pages, $25.00.

At the twilight of the Reagan-Bush era, Pablo Escobar reigned at the pinnacle of the illegal drug trade. Wealthy beyond avarice and arguably the most powerful criminal on the face of the earth, Escobar was ruthless. Unmitigated violence characterized his ascension from petty thief to billionaire drug lord. Violence is at the nexus of this tale of the rise and fall of an unremarkably common man. A violence that he exploited, manipulated, and effectively sculpted into a sadistic art form.

In 1887, Lord Acton wrote, "Power tends to corrupt, and absolute power corrupts absolutely." Ironically, the brutal violence that catapulted Escobar into power became a drug unto itself, and his cavalier abuse of that savagery ultimately decayed the roots of his power. Escobar's demise began in 1989 with the assassination of Luiz Galan, a popular Colombian politician and leading presidential candidate. Galan's murder was followed three months later by the bombing of a plane and the deaths of 110 people, including two Americans. At that point, Bowden asserts, Escobar stopped being just "a thorn in the side" of the United States to becoming "Public Enemy Number One."

On 22 July 1992, Escobar escaped from his luxurious mountaintop prison, from where he had maintained the drug trade that continued to ship over 70 tons of cocaine to the United States each month. As Colombian forces surrounded and prepared to move the drug lord to a prison more befitting his stature as a violent criminal, Escobar slipped away into the night, evading an entire brigade of Colombian infantry. In true technothriller fashion, Bowden vividly describes the evolving situation in exciting and excruciating detail. From the moment the United States directed its vast resources toward capturing "Don Pablo," Pablo's life was forever changed.

Drawing on his experience as a reporter for the *Philadelphia Enquirer*, Bowden uses personal interviews, eyewitness accounts, and a criminologist's eye for detail to construct the story behind the rise and fall of the world's most powerful criminal. Bowden tells two parallel tales: one, a story of the human dimension, is an account of Escobar and the culture that fostered his ascension to power and the excruciating toll the manhunt exacted on his pursuers; the other is a gripping tale that literally propels the reader into the action.

*Killing Pablo* is a unique, superbly written account of Escobar's story. Exhaustively researched and presented with an inspiring tenacity, the book takes the reader into a darkness that few of us can imagine. And, as if an apocalyptic battle between the forces of good and evil were not enough, Bowden leaves us on a precipice as the story draws to a close.

Many readers will appreciate Bowden's uncommonly stark portrayal of a Colombian society and culture that was ideal for the harsh education and development of a criminal mind such as Escobar's. Others, however, will not be able to ignore the relevance of this story to current counterterrorism operations.

Escobar carelessly, and without regard to the inherent consequences, wielded violence and cocaine as tools of his trade. Ultimately, he awoke the "sleeping giant" (the United States) and introduced a new terror into his own life—a terror that offered relentless pursuit from which there was no escape. In his final months of life, Escobar learned to fear the violence that characterized his existence.

The operation that eventually brought the Colombian drug lord to his death was lengthy, deliberate, and somewhat anticlimactic. Some would say that a violent end is the only justice men such as Escobar can expect or rightfully

deserve. As readers of *Killing Pablo* will certainly appreciate, efforts in the war against terrorism parallels the war on drugs. *Killing Pablo* is well worth reading.

**MAJ Steven Leonard, *USA*,**
***Fort Campbell, Kentucky***

---

**TERRORISM: Informing the Public**, Nancy Ethiel, ed., McCormick Tribune Foundation, Chicago, IL, 2002, 196 pages, free.

*Terrorism: Informing the Public*, an addition to the Cantigny Conference Series, is an academic work that turned into surprisingly well-presented, informative reading for those who delve into the shifting sands of media-governmental relationships.

The book's appearance is timely, arriving during early 2003 at a time when the *New York Times* reported that the fear epidemic in the United States was spreading much faster than the severe acute respiratory syndrome (SARS) epidemic. In the same issue of the *Times*, Frank Rich speculated that if cable television taught us anything during the Iraq war, it is this: battalions of anchors and high-tech correspondents can cover a conflict 24/7 and still tell us less about what is really going on than could any 27 pre-digital reporters who accompanied the U.S. troops in Normandy on D-Day.

For those who want quick-fix answers, not much of a consensus emerges from *Terrorism: Informing the Public*. The government functionaries at the conference (and it is an impressive list) continue to assert that the media overdramatizes everything, while the media representatives' (an equally impressive list) knee-jerk retort that "no comment" answers given during the heat of a terrorist strike will bring out instant analyses by outside experts just as the Iraq war brought out a brigade of "rent-a-generals" and "rent-a-colonels."

On the other hand, in between these polar stances, this thin book, available free, inaugurates a necessary dialogue and makes some important points. "When there is no real news," asks the editor, "why can't the interim period be used by both the press and the government to educate rather than speculate?" And, "Why can't special media training be started in which both sides participate as equals (a model that would seem to combine a warfighter exercise with the pre-Iraq 'media basic training')?" One of the most inviting sections of this conference report is a role-playing scenario that illustrates how complex it is to manage and report on a bioterrorism incident.

**George Ridge, *Ph.D.*,**
***University of Arizona, Tucson***